NATIONAL CONVENTION OF MAYORS AND COUNCILMEN, COLUMBUS, OHIO, SEPT. 28 TO OCT. 1, 1897.

\$3.00 a Year; \$4.00 to Foreign Countries.

Single Copies, 25 Cents.

III OYERNENT

AUGUST, 1897.

CONTENTS:

~~0000000

NATIONAL CONVENTION OF MAYORS AND
COUNCILMEN . 45
A GAS COMPANY ASSESSMENT . 50
AN EXPERIMENTAL SAND FILTER . 51
NOT IN THE ASPHAIT TRUST . 51
GLASGOW: ITS MUNICIPAL ADMINISTRATION . 52
STREET SPRINKLING FOR CYCLISTS . 55
A GOOD THING IN GABBAGE . 55
NOTE AND COMMENT . 56
NIAGARA FALLS PAVING DECISION . 57
NIAGARA FALLS PAVING DECISION . 57
SALARIES OF CITY TREASUREES . 57
SALARIES OF CITY TREASUREES . 57
BALTIMORE'S OBSOLETE CHARTER . 58
NEW CREMATORY AT WILMINGTON . 58
TELEGRAPH SUPERINTENDENTS CONVENTION . 58
INCREASED REVENUE FROM SERVICE PIPES 60
PUBCHASHING AGENT FOR CHICAGO . 61
WHAT JERSEY CITY WILL SPEND . 62
COLUMBUS TAX LEVY . 62
FINANCIAL SHOWING OF DETROIT . 62
AGAINST RESTRICTIVE SPECIFICATIONS . 62
MUNICIPAL GARBAGE PLANT . 63
GAS COMPANIES PAY FOR CITY HALL . 64
SEWEE THROUGH SOLID ROOK . 67

DEPARTMENTS:

Fire and Police-Taxes and Finance-Light and Water-Public Improvements-Schools and Libraries -Parks and Boulevards-Public Health-Personal-Trade Notes

AMONTHLY MOSOZING Devoted to the Processor Assistins of Municipalities

PUBLICATION OFFICE, 150 NASSAU ST., NEW YORK.

City Government reaches the purchasing powers of nearly every city and important town in the United States.

"For Its Simplicity, Its thorough construction and the ingenuity of various devices designed to insure perfect operation under all conditions." (Report of World's Fair Committee).

750 CITIES AND TOWNS

Fire Alarm Police Signal Telegraphs

GAMEWELL FIRE ALARM TELEGRAPH CO.,

19 BARCLAY ST., NEW YORK CITY.

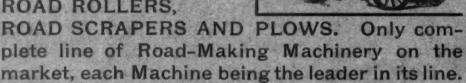
....AGENTS....

THE POLICE TELEPHONE & SIGNAL CO., 161-163 Randolph Street, Chicago. THE FIRE AND POLICE TELEGRAPH CO., Louisville, Ky.

WEBB CHANDLEE, Richmond, Ind. NEW ENGLAND GAMEWELL CO., 657 Washington Street, Boston. R. A. ROSE, 230 Kearney St., San Francisco, Cal.



STREET SPRINKLERS. STREET SWEEPERS. ROCK CRUSHERS. ROAD MACHINES, ROAD ROLLERS.



SEND FOR LARGE ILLUSTRATED CATALOGUE.

AUSTIN & WESTERN CO., Ltd., 70 N. CARPENTER ST., CHICAGO.

FIRE AND BURGLAR

PROOF SAFES

Protect the municipal records and funds of thousands of American cities and towns.

The United States Government furnishes First and Second Class Post Offices, Sub-Treasuries and Land Offices with Mosler Safes.

Mosler Safes are unequalled in point of security. CITY GOVERNMENT uses and indorses

The Mosler Safe Co.,

305 Broadway

NEW YORK.



Ideal Method of Street Cleaning

anced and most perfect me The BAG CARRIER, sho

THORNTON N. MOTLEY & CO.

Railway Equipment, Railway, Steamship and Contractors' Supplies, Machinery and Hardware for Export,

NEW YORK.

FABRIC FIRE HOSE CO. 68 MURRAY ST. NEW YORK.

W. T. COLE,

GEN. MANAGER.

BALANCEWOYER

LILLARGEST LANUFACTURER LOF

ILEOSEILIOSEINTHE WORLD

PATENTEES AND SOLE MANUFACTURERS OF

WAX AND GUM TREATED FIRE HOSE

BEST OF VENTILATION ALSO SMOKY CHIMNEYS CURED.

THE COST IS SMALL BUT THE SATISFACTION IS GREAT .-

NO BUILDING IS COMPLETE WITHOUT A

PANCOAST . VENTILATOR.

Made in all sizes from 2 inches to 7 feet and Guaranteed Absolutely Stormproof with no back draught

For sale by all dealers or by

THE PANCOAST VENTILATOR CO.

(INCORPORATED.)

Offices, 316 Philadelphia Bourse, PHILADELPHIA, PA. FOREIGN OFFICES. LONDON, PARIS, GENEVA.

Send for Testimonials and Discounts.



Who Says

OUR APPARATUS DOES NOT WORK ON OTHER MAKES OF

CITIES AND TOWNS USING OUR SYSTEM SAY THERE IS NOTHING LIKE IT.

New Catalogue

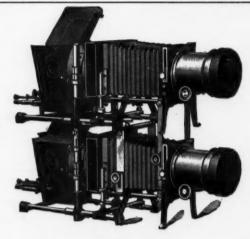
OF OUR APPARATUS READY. SEND FOR ONE.

Don't Buy

A SYSTEM UNTIL YOU HAVE INVESTIGATED OURS.

United States Fire & Police Telegraph Co.,

246 WASHINGTON ST., BOSTON, MASS.



WHAT WE

When you are prepared to put Stereopticons or Single Lanterns in your Schools or other Institutions we wish you would make the conditions such as would admit of the different manufacturers entering their machines in a competition, the one giving the best results to have the sale.

We have a Stereopticon made according to the

ing the best results to have the sale.

We have a Stereopticon made according to the plans laid down by the New York Board of Education, which we are not afraid of placing alongside of any other machine on the market for good results.

Our plan is to make the very best machine at the very lowest cost. Our catalogue (mailed free) is interesting and instructive to a high degree. Send for it

J. B. COLT & COMPANY,

120 Nassau Street, New York.

Smoke Nuisance Abated.

Obnoxious Odors Destroyed.

Cost of Fuel Reduced.

Residual Products Utilized.

THESE ARE THE PRINCIPAL ADVAN-TAGES TO BE DERIVED FROM USING OUR

CONDENSER.

United Smoke and Vapor

Condensing Co.

536 & 538 Philadelphia Bourse,

PHILADELPHIA.

Our CONDENSER, simple in construction, accomplishes: First, induced draught, regulated at will; second, perfect condensation by submersion in water; third, collection of residual products and provision for the utilization of fixed gases if in any volume.

THESE SMOKE AND VAPOR CON-DENSING DEVICES are necessary for all public buildings, factories, smelters, chemical works, garbage crematories, gas works, etc. They save fuel, do away with the necessity for high chimneys, and absolutely prevent smoke, vapor and obnoxious odors from emitting from



Produces with 80 lbs. pressure a Spray of about 70 feet in diameter, and

... COMBINES: ...

- 1. Solid stream alone.
- 2. Spray alone of any size and volume, and adjustable to a forward, right or any intermediate angle.
- 3. Solid stream and any spray combined without materially decreasing one or the other.
- 4. Complete and independent shut-off for solid stream and spray.

The "Midget" Smoke Protector,

Positively the smallest, simplest, most efficient and cheapest respirator in the market. Protects eyes, nose and mouth completely, and can easily be carried in the pocket. Price, \$36.00 per dozen.

The "Combination" Helmet

is the most practical device ever invented! Combines an ordinary helmet with smoke-protecting goggles in such a way that the goggles may be adjusted instantaneously with one hand without removing the helmet, and quickly and easily stored out of the way when

A. W. DOLFINI & CO.,

140 Nassau St.,

New York, N. Y.

Standard Water

Successors to The Tuerk Hydraulic Power Company. Established 1877. Sole manufacturers of the Standard Disc and Current Water Meters.



OUR STANDARD DISC METER.

combining our latest improvements, which for accuracy and fine mechanical construction cannot be excelled. We furnish dial or straight reading counters in either style of meter.

We also manufacture the celebrated

Tuerk Water Motors,

which have been on the market for twenty years, and with our late improvements are the only motors that can be run economically with metered water.

Made in eight sizes, with governors on larger sizes only.

DEPARTMENT OF PUBLIC WORKS.

BUREAU OF WATER REGISTER.

NEW YORK, December 30, 1896. Record of Test of 5% in. Standard Water Meter.

Size of Outlet.	No. of feet of water passed through Meter.	Time of Test, hours and minutes.	Head pressure, pounds.	Back pressure, pounds.	Register of Meter.	No. of fee of water in tank.
5% in.	100	28m. 28m.	34 34	7 7	100 s 101	100
½ in.	100	40m. 40m.	34 34	22 22	$100\frac{7}{10}$ $101\frac{3}{10}$	100
3% in.	50	30m. 36m.	34 34	28 28	5018 5010	50
¼ in.	50	1h. 1h.	34 34	32 32	51	50
½ in.	25	2h. 2h.	34	33	$\begin{array}{c} 51 \frac{8}{10} \\ 25 \frac{8}{10} \\ 25 \frac{7}{10} \\ 25 \frac{7}{10} \\ 25 \frac{1}{10} \end{array}$	25
1 in.	25	5h. 5h. 8m.	34 32	33	$25\frac{16}{16}$ $25\frac{1}{16}$	25
1 in.	25	19h. 19h. 35m.	34	331/3	2516 2536 2536	25

NOTE.—Figures in heavy-faced type denote results of second test after 100,000 feet of water passed through meter.

A. S. GEAR, General Foreman, Dept. of Public Works, in charge of Corporation Yards.

Standard Water Meter Company,

New York Office and Factory: 23 VANDEWATER STREET.

Chicago Office: 39 DEARBORN STREET. Ames Building, Boston.

Betz Building, Philadelphia.

Rookery, Chicago.

THE NATIONAL CONDUIT AND CABLE CO.

Manufactures Cement-Lined Conduits and Paper Insulated Wires and Cables for Police and Fire-Alarm Telegraph, Telephone and Electric Light, Underground or Aerial.

CONTRACTORS FOR COMPLETE SUBWAY SYSTEMS.

New York Office, Times Building.

Excelsior Machine Works.

CHAS, HVASS, PROP.,

MANUFACTURER OF

Street Sweeping Machinery and Implements.

MACHINE, PUSH AND SCRAPER BROOMS
For all Purposes.

509 and 511 East 18th St., NEW YORK.

Descriptive Catalogue sent on application.

BISHOP



Weather Bureau Cable, Thunder Bay, Mich.

are used by all departments of the United States Government: Navy. Army, Life Saving, Weather Bureau, and for inside wires in Public Buildings.

All are guaranteed to be the best of their kind. The difference in cost between these and cheap goods is all in superior material and labor employed. We can't get big profits.

BISHOP GUTTA PERCHA CO.,

420-426 East 25th St., NEW YORK.

THE

WARREN FILTER

Simple, Efficient, Economical,

COMBINING THE ADVANTAGES OF

Coagulation, Sedimentation, Filtration.

CORRESPONDENCE SOLICITED. ESTIMATES FURNISHED. RESULTS GUARANTEED.

CUMBERLAND MANUFACTURING COMPANY,

220 DEVONSHIRE ST.,

Boston, Mass.

Gordon Primary Cell.



Cut showing complete Cell placed in jar.

For Fire and Police Telegraph Systems.

The Perfect, Modern,
Longest-lived and most
Economic Cell ever adopted
by Municipalities for
Fire and Police
Alarm Systems.

In use by the leading cities, railroads, telephone and gas engine companies.

Its Established Merits.

Discharge of constant current without polarization.

Non-consumption of Elements on open circuit. Labor saving needs no supervision. Cleanliness - no noxious odors or gases. Non-freezing quality at 28 degrees b low zero. Economic value—50% cheaper than gravity cell.

Highly successful for Railroad Signal, Bell Annunciator, Gas Engine, Motor Work and Marine Service.

For full information, highest testimonials, descriptive circular and price list, address



Cut showing cell without jar.

The Gordon Burnham Battery Co.,

82 West Broadway,

NEW YORK CITY.

CITY GOVERNMENT.

[Entered as Second-Class Matter at the New York, N. Y., Post Office, August 12, 1896.]

VOL. 3. No. 2.

NEW YORK, AUGUST, 1897.

\$3 A YEAR.

NATIONAL CONVENTION GOES TO COLUMBUS.

MAYORS AND COUNCILMEN WILL MEET AT OHIO CAPITAL LAST WEEK IN SEPTEMBER.

The General Committee Represents the Whole Country
—Columbus Will Entertain Lavishly.

The National Convention of Mayors and Councilmen will be held at Columbus, Ohio, on September 28, 29, 30 and October 1. The various committees have been organized, and the work of making the convention the success it deserves to be is well under way.

Now that municipal government has come to be regarded as one of the most important questions of the day, it must be admitted that the coming together of the mayors and councilmen of American cities for the purpose of discussing the various problems that confront them in the discharge of their official duties will be an event of extraordinary interest. Of all the national conventions ever held none can bring results so beneficial to the property interests of the country—the very backbone of the nation—as that of the mayors and councilmen, for it rests with these officials and their subordinates to improve the condition of our municipal life so that it cannot be wrecked upon the rocks of confiscating Pure and wholesome water, sewerage systems adequate to protect the public health, schools for the proper education of our children, parks and playgrounds for the comfort and enjoyment of our common people, hospitals for suffering humanity, charitable institutions for the unfortunate, workhouses for the law breakers, fire and police departments for the protection of life and property, improved streets and bridges for the safety and convenience of the whole community, sanitary collection and disposal of garbage, and clean streets are only a few of the necessities of our American cities which must be provided and maintained by the people through the agency of their elected officials. These necessities cost money, and to provide the best at the least cost, together with the task of securing to the city adequate remuneration for the use of public streets by private corporations, seems to cover the whole field of practical municipal reform. And when the mayors and councilmen meet in national convention for the purposes of ascertaining, by an interchange of knowledge born of actual experience, what is best in municipal institution, how

the best may be secured at the lowest possible cost, and what can be done to exact compensation for public franchises, the cause of municipal reform or regeneration will have received a benefit that it could never achieve by other means.

That the Columbus convention will be thoroughly representative of American municipalities is promised by the make-up of the general committee, the membership of which includes mayors and council men from every section of the country and from cities both large and small. Following is the complete committee:

MAYORS.
Samuel L. Black, Columbus, Ohio, chairman.
Josiah Quincy, Boston, Mass.
Carter H. Harrison, Chicago, Ill.
Robt. E. McKisson, Cleveland, Ohio.



SAMUEL L. BLACK, MAYOR OF COLUMBUS, /96 Chairman General Committee.

H. P. Ford, Pittsburg, Pa.
Geo D. Todd, Louisville, Ky.
Wm. C. Maybury, Detroit, Mich.
Thos. Taggart, Indianapolis, Ind.
Wm. M. McCarthy, Nashville, Tenn.
Robt. Pratt, Minneapolis, Minn.
Wm. M. Jones, Kansas City, Mo.
T. S. McMurray, Denver, Col.
James D. Phelan, San Francisco, Cal.
Geo. E. Green, Binghamton, N. Y.
James Allen Rice, Canton, Ohio.
J. Adger Smyth, Charleston, S. C.
Geo. W. Ochs, Chattanooga, Tenn.
John MacVicar, Des Moines, Ia.
J. A. Johnson, Fargo, N. Dak.
A. W. Fly, Galveston, Tex.
Edw. Hoos, Jersey City, N. J.
Gustav Tafel, Cincinnati, Ohio.
E. H. Dial, Meridian, Miss.
A. C. Hastings, Niagara Falls, N. Y.
Warren Penwell, Pana, Ill.
L. A. Vories, St. Joseph, Mo.

A. B. Calvert, Spartansburg, S. C. S. M. Jones, Toledo, Ohio. F. W. Vandusen, Norwalk, Ohio. Geo. F. Heath, Monroe, Mich. T. J. Medill, Rock Island, Ill. E. K. Tarbell, Winona, Minn. O. H. Phillips, Larimore, N. Dak. W. F. Hite, Huntington, W. Va. S. F. Smith, Davenport, Ia. Chas. H. Fellows, Topeka, Kan. M. H. Levagood, Elyria, Ohio.

Geo. P. Howard, Atlanta, Ga.
Adam H. Leich, Brooklyn, N. Y.
John L. Stone, Baltimore, Md.
John M. Harlan, Chicago, Ill.
Jesse C. Bond, Camden, N. J.
A. J. Watson, Elmira, N. Y.
W. H. Tigar, Fort Wayne, Ind.
H. B. Russell, Hartford, Conn.
Jos. M. Kennedy, Montgomery, Ala.
John Jeroloman, New York City.
Geo. L. Burton, New Haven, Conn.
D. J. Courtney, Jr., Nashua, N. H.
P. F. Daly, New Brunswick, N. J.
E. M. Conroy, Ogden, Utah.
W. W. Bingham, Omaha, Neb.

Samuel L. Black, mayor, chairman.
Gilbert H. Stewart, president Board of Trade.
J. Y. Bassell, president Business Men's League.
H. T. Benham, president Hub Board of Trade.
Cotton H. Allen, ex-mayor.

J. H. Canfield, president Ohio State University. W. D. Park, president M. and M. National Bank.

These gentlemen are the best representatives of the business and social life of Columbus, and they are all enthusiastically working to make the mayors' and councilmen's convention a brilliant success. They give unqualified assurance that every delegate and visitor to the convention will return home singing praises of Columbus. There is not the slightest doubt that the officials who will go to Columbus from all parts of the country will be entertained in royal style, as every provision is being made for a cordial welcome and generous treatment. A fund of \$5,000, and probably more, will be raised for convention purposes, and the largest share of it will be devoted



GREAT SOUTHERN HOTEL, COLUMBUS, OHIO. 197

J. D. Reed, Portsmouth, Va. R. H. Ryder, Pawtucket, R. I. A. H. Dewey, Rochester, N. Y. A. Albrecht, St. Paul, Minn. Chas. Nagle, St. Louis, Mo. F. A. Walker, Trenton, N. J. G. A. Sauer, Utica, N. Y. C. M. Leitch, Wilmington, Del. A. M. Powell, Worcester, Mass.

ARRANGEMENTS AT COLUMBUS.

Mayor Samuel L. Black, of Columbus, has taken up the work of preparing for the convention with enthusiasm. He is a gentleman of extraordinary resources and energy, and knows no such thing as failure in his undertakings. As an instance of his remarkable activity it may be said that before the close of the same day that Columbus was selected as the convention seat he had secured the services of the leading business men of his city for the committee on arrangements and invitations, had started the local press to "boom" the convention, and had received a very substantial foundation for the convention fund. The local committee on arrangements and invitations is made up as follows:

to the entertainment features. A goodly portion of this fund has already been subscribed, and the balance will be easily secured.

Mayor Black and his associates on the arrangement committee are determined to handle this affair in the most thorough manner. As an indication of how completely every detail is to be covered the announcement is made that the local reception committee will be composed of 100 representative citizens, including the governor of the State and many other widely known people. Every visitor to the convention will be met at the depot by members of the reception committee and be made to "feel at home" from the moment he steps from the train.

The feeling of the people of Columbus in regard to the convention is truly reflected in an editorial printed in the *Dispatch*, one of the leading local dailies, on August 12. The editorial says:

The Dispatch hastens to congratulate the people of Columbus, to congratulate Mayor Black, and to congratulate the mayors and city officials of the United States on the choice of this

city as the place for holding the first national convention of mayors and city officials ever held in this or any other country. It is a special compliment to Columbus and a big feather in her cap. As far as the city is concerned, it brings here what promises to be a most notable gathering and what is bound to add greatly to Columbus' reputation as a national convention city; as far as the mayors and councilmen and other city officials who will come here are concerned, they will find a city that is convenient of access, that has an auditorium that is an auditorium, and that will welcome them and do her best to make their stay pleasant and profitable; and, finally, as far as Mayor Black is concerned, it can truly be said that he has achieved a personal triumph and has placed himself high on the

These bodies should come promptly and solidly to the front to meet the conditions that are essential to the success of this convention. For, being the first convention of the kind ever held, it behooves Columbus to help to start it off in a way that will make a favorable and lasting impression. There is a fine opportunity here, and the city will make a great mistake if it neglects to seize it.

The real significance and importance of this convention is to be found in the fact that it is to be composed of practical men of affairs, men who are interested in matters of municipal improvement and at the same time are in touch with the politics and the other machinery that are at the bottom and that surround all municipal government in this country. There are



MEMBERS OF COMMITTEE ON ARRANGEMENTS AND INVITATIONS.

roll of the city's enterprising and public-spirited citizens. And that is a greater honor in some respects than even being mayor.

Representative business men of the city have given the mayor their personal assurances that they will back him up in all that he does and in all the promises and guarantees that he may make in connection with this convention. This is encouraging and this is right. But it should be supplemented at the earliest possible day by more formal, public and general assurances of the same kind from the board of trade and the business men's league. already in existence national organizations interested in municipal reform. The chief of these is the National Municipal League. It holds conventions every year. The last one was held in Louisville not very long ago. But the trouble with these organizations, and the thing that tends to lessen the real value of their work, is the fact that those who take active part in the discussions and recommendations are principally theorists, men who are not in touch with the practical affairs of a city government, and who therefore can hardly be expected to

appreciate or be able directly to influence or modify the political and other conditions and difficulties that surround the actual workings of a city administration. That is probably the chief reason why the seed they sow does not take root faster. Their attitude is too likely to be that of critic and ideal reformer rather than that of an actual reconstructor.

Whatever may be the outcome of the convention of mayors and others connected with the governments of the various cities of the country, the movement will have this new and distinct advantage—the men who take part in it will be in a position to carry into more or less practical effect, if they are sincere, any reforms or improvements that may be agreed upon as desirable and feasible after mutual discussion. It all depends, of course,

fortunate in the possession of many advantages as a convention city. Its immense and excellently fitted auditorium, which has been the scene of many notable conventions, is just the place for the sessions of the mayors and councilmen. The geographical location of the city and its numerous railway facilities make it easily accessible from all sections of the country, being only a night's run from the great metropolitan cities of both the East and the West. As to hotel accommodations, no city in the United States surpasses the capital of Ohio. There are many large, modern hotels, the leading ones being the



THE NEIL-COLUMBUS, OHIO, 2 . 4

on the sincerity of the officials. The convention can have no compulsory power. If mayors and councilmen want the advantage of getting in a direct way the experiences of other mayors and officials, here is their chance. The probability is that if they are sufficiently interested in municipal improvement to attend the convention they will make some practical use at home of the ideas and experiences secured there. Judging by the letters received from mayors all over the country by those who are taking the lead in getting up the convention, the interest in the movement is unexpectedly great and surprisingly general. And this is as encouraging as it is unlooked for.

Columbus is known throughout the country as one of our most beautiful and progressive cities, and it has many points of peculiar interest, which will be fully described in the next issue of CITY GOVERNMENT. It is Chittenden, the Neil, and the new Southern, which is to be opened this month. These three hotels are veritable palaces, and afford every means for comfort and luxury.

SOME DISTINGUISHED SPEAKERS.

As the programme committee of the convention is just being formed, no definite announcements can be made at this time as to the speakers and their topics. However, the programme will be arranged within a fortnight, and printed copies will be sent to mayors and councils throughout the country. It is the intention to have most all of the principal addresses made by active

city officials, and every topic will be open to general discussion by the delegates in the convention.

It is not improbable that the list of speakers will include no less a person than ex-President Grover Cleveland, who, it will be remembered, is a former mayor of the city of Buffalo. Other distinguished gentlemen who will probably address the convention are: Hon. William L. Strong, mayor of New York; Hon. Josiah Quincy, mayor of Boston; Dr. Albert Shaw, editor of the Review of Reviews; Col. George E. Waring, Jr., the famous street cleaning commissioner of New York; Hon. Car-

executives and members of councils of cities in the United States.

Second. The hearing of addresses on important municipal topics by distinguished speakers.

Third. The general discussion of all questions pertaining to the administration of all branches of municipal work by mayors and councilmen from all parts of the country.

Fourth. The interchange of ideas and knowledge on municipal problems, such as will result from the experienced city officials coming in contact with each other.

You will readily observe that the objects of the convention were designed with a view to securing a general discussion of all questions pertaining to municipal administration by those



THE CHITTENDEN, COLUMBUS, OHIO. 2. 6

ter H. Harrison, mayor of Chicago, and Hon. Hazen S. Pingree, Governor of Michigan and former mayor of Detroit. It must not be inferred that the smaller cities of the country are to be overlooked, for their interests will be well represented in the programme.

LETTER OF GENERAL COMMITTEE.

The first circular sent out by the general committee sets forth the objects of the convention. It reads as follows:

The first national convention of the mayors and councilmen of the cities of the United States will be held at Columbus, Ohio, for four days, beginning Tuesday, September 28, 1897. The objects of this convention are:

First. The formation of a national organization of the chief

who have had the actual experience in the work—the officials themselves. Such a discussion, bringing out as it will an interterchange of original ideas and knowledge among men experienced in city government, cannot fail to result beneficially to the taxpayers of the cities which will be represented by their officials at this convention.

The convention will deal with such important topics as the granting of street railway, gas, electric and other franchises, and the control of and revenue derived from corporations enjoying such special privileges; the collection and disposal of garbage, which is a branch of municipal work still in the experimental stage; the relative merits of the various street-paving materials, including cedar block, brick, granite, Medina block, asphalt block and the different kinds of sheet asphalt; the cleaning of streets, which is still a vexatious problem in many cities; the municipal management of lighting plants and the cost of street

lighting under the contract system; the muncipal management of public water supplies and the necessity for water filtration; fire and police protection; parks and playgrounds; municipal finances; taxation and special assessments; the regulation of the social and saloon evils, etc. It is not intended to make this a municipal "reform" convention, but a meeting of experienced city officials for the dissemination of facts, rather than theories.

The local committee at Columbus are making elaborate preparation for the entertainment of visitors, and the general committee is desirous of having every city of any importance in the United States send its mayor and as large a delegation as possible from its council to the convention. The expense of the trip will be money well spent in the cause of economical city government. The secretary of the general committee will be pleased to furnish you with any particular information you may desire

LETTERS FROM CITY OFFICIALS.

CITY GOVERNMENT has received hundreds of letters from city officials heartily endorsing the convention movement and promising attendance. We quote from a few of these letters as follows:

"I am heartily in favor of the convention, and its good results will be far reaching. Valuable suggestions and ideas are bound to spring from a meeting called for the purpose of allowing practical men, not theorists, to discuss a question with which they are perfectly familiar, and which so vitally concerns the interests of the country."—Robert Pratt, mayor of Minneapolis, Minn.

"The Commissioners of the District of Columbia heartily approve the proposition for a national conference of mayors and councilmen."—John W. Ross, president of the Board of Commissioners, Washington, D. C.

"I am in sympathy with the movement for a convention of mayors and councilmen, and will endeavor to shape my affairs so as to be present."—George D. Todd, mayor of Louisville, Kv.

"I heartily approve of the convention. Such a conference would undoubtedly result in an interchange of ideas which would be highly beneficial to all concerned. The cities represented would certainly profit by the information obtained by their officials in this manner."—Edward Hoos, mayor of Jersey City, N. I.

"The object of the convention is meritorious, and the results will be beneficial."—Lathrop C. Stow, mayor of Grand Rapids Mich

"I most heartily concur in the idea of the proposition for a national convention of mayors and councilmen. I hope that your efforts may be crowned with success."—Joseph M. Kennedy, alderman, Montgomery, Ala.

"The best available method of improving the executive, 'legislative and administrative affairs of cities will be secured by the interchange of opinions expressed by practical and experienced public officials, and I should be gratified to see the convention a big success. I have a large amount of valuable data touching all phases of municipal management, and will be glad to attend the proposed meeting and gather greater knowledge of the subject."—Henry E. Tiepke, mayor of Pawtucket, R. I., from 1894 to 1897.

"It seems to me that if a municipal government is to be elevated, purified and reformed, it will have to be done by men who have practical official experience in that line. Improvement in city government is an intensely practical matter, and the best methods of giving good service in street improvements, light and water supplies and restrictions on public franchises, are matters which only men having experience in them can practically improve. I have all possible respect for the so-called 'good citizens' leagues' for the reform of municipal government in this country, but I agree with you that their results are not commensurate with their good intentions. It is undoubtedly true that the most of such men who go into such leagues have an earnest desire to reform city politics, and

it is equally true that they have practically no ideas capable of being put into operation which would bring about the reforms. In many instances, also, these leagues are dominated, or at least to some extent influenced, by men having selfish ends in view and personal axes to grind, who join the leagues for that purpose. They are frequently the last resort of broken down politicians, who are endeavoring to regain political influence and official positions. Anybody can find fault with any system of government, national, state, county or municipal. Anybody can criticise, but it is not anybody that can practicaly reform, City government is so largely a strictly business operation, and involves so thoroughly the idea of a business investment of money on business principles, that the theoretical man, it has always seemed to me, was out of his place in attempting to deal with them. I hope to be present at the Columbus convention."-S. G. Heiskell, mayor of Knoxville, Tenn.

"There is no doubt that a convention of mayors and councilmen will result very beneficially to the taxpayers. I would suggest that the city civil engineers be invited to the conference."—Thomas Taggart, mayor of Indianapolis, Ind.

"The citizens and municipal officers of our city will be very glad indeed to co-operate in every way and to send delegates."—
R. E. McKisson, mayor of Cleveland, Ohio.

"I am very sure that much good would result from an exchange of views. My observation convinces me that there is everywhere in this country a desire for better municipal government. Such a conference, sustained by an enlightened public sentiment, would be a benefit to all who participated."—William C. Maybury, mayor of Detroit, Mich.

A GAS COMPANY ASSESSMENT.

BY H. J. GONDEN.

Last year the St. Paul Gas Light Company, which pays dividends on \$1,500,000 of stock and interest on \$3,823,000 of bonds outstanding, paid taxes on an assessed valuation of \$610,000. This year the board of equalization at St. Paul has the temerity to raise the assessment to \$1,500,000, and the vice-president of the gas company, in a rage of indignation, rushes into subsidized print to threaten the people with an advance in the price of gas in case the assessment is allowed to stand. He complains that the company will not be able to meet the interest on its "water" if it is compelled to pay \$25,000 more taxes a year, unless it raises the price of gas. In plain language, this gas company official tells the people of St. Paul that any burden of taxation placed upon the company will be deliberately shifted back upon the people; if the company must pay taxes on anything like the capitalization it pays interest on the money must come from the gas consumers, even if the price of gas goes up to an exorbitant figure. There is nothing new or startling in this doctrine. The St. Paul Gas Light Company has for years made its patrons pay, through the medium of exorbitant prices for gas, interest charges on a capitalization of over \$5,000,000, while its plant could be replaced any day at a cost of less than \$1,000,-000. Why, then, should it surprise the people of St. Paul to be told that they must go down into their individual pockets for the money to pay the taxes of this monopolistic corporation? The vice-president of the company, in his threatening interview, very frankly says that if the assessment is allowed to stand "the result will be that the people of the city will have taxed themselves \$25,000 a year more than they are now taxed," and "they will have

seriously embarrassed a great and fairly prosperous business, upon which some 1,250 people of the city are absolutely dependent." What a crying shame it is for the people of St. Paul to "seriously embarrass a great and fairly prosperous business," which pays 5 and 6 per cent. interest on \$5,323,000 of capital, of which over \$4,000,000 is "water"! And then how sad it is to contemplate the fact that the people of St. Paul do not appreciate the philanthropic spirit which impels the St. Paul Gas Light Company to employ the workmen necessary to carry on its business, and pay them the real wages "upon which some 1,250 people of the city are absolutely dependent"! Poor gas company! it has nothing but an exclusive franchise and money for consolation.

Last year the net earnings of the St. Paul Gas Light Company amounted to \$247,012.13. This amount is 5 per cent. interest on \$4,940,240. The fact that the value of a business is based on its earning power is what enabled the Sf. Paul Gas Light Company to sell its watered stock and bonds. On the liberal 5 per cent. basis, therefore, the value of the St. Paul gas business last year could be put down at \$4,940,240. Then why is it unjust to assess the property at \$1,500,000, less than a third of its actual value? It is unjust solely because other properties in St. Paul are assessed as high as from 50 to 100 per cent. of actual values.

The exclusive franchise gave the St. Paul Gas Light Company the power to earn 5 per cent. on \$4,940,240 last year. The exclusive franchise gave the company the power to float stock to the amount of \$1,500,000 and bonds to the sum of \$3,823,000. This same exclusive franchise now gives the company the power to raise the prise of gas for the purpose of making the people pay the taxes on the value it has created. The only recourse for the people of St. Paul is to test the validity of this franchise in the courts. In case of failure to annul the franchise, then the people should go back to the primitive oil lamp rather than submit to the extortion which a raise in gas prices means.

The rumpus over this assessment is not without its amusing feature. The editor of the Pioneer Press, one of St. Paul's daily newspapers, furnishes the amusement by writing a long editorial, in which he attempts to show that the advance in the assessment is not justified by the facts. Instead of publishing the relevant facts, such as the amount of stocks and bonds issued by the gas company, and the amount of its net earnings, the editor of the Panier Press very cutely sets up a comparison, by items, of the assessments made against the gas company This comparison and the street railway company. serves a double purpose—that of diverting attention from the main question at issue and that of showing that the gas-company assessment must be wrong, because the street-railway assessment is not right. This is particularly amusing to us, because we know that the editor of the Pioneer Press has cleverly demonstrated to his illiterate but opulent employers, who are largely interested in gas-company securities, his ability to "make monkeys of the people," and thus protect the interests of the gas monopoly.

One of the many misleading features of the Pioneer Press editorial is the statement that "the Pioneer Press took the lead two or three years ago in the agitation for cheaper gas," which resulted in a reduction of the rate from \$1.50 to \$1.30. The fact is that the lead in this agitation was taken by Col. R. H. Pugh, as the representative of Henry C. Rew, of Chicago, who secured the signatures of about 5,000 St. Paul gas consumers to a petition asking the council to grant him a franchise for a gas plant which would furnish gas at 90 cents and \$1 per thousand feet. Of course the St. Paul Gas Light Company people knew that the council would not grant the franchise, but they also knew that public interest had been aroused in the matter of gas rates, and they realized the wisdom of making a voluntary cut in their price. The Pioneer Press, being on the inside, was very properly given an opportunity to sop up a little glory by urging the reduction after it had been decided upon, but before it had been announced by the gas company.

AN EXPERIMENTAL SAND FILTER.

The experimental natural sand filter plant, at Pittsburg, for the purification of Allegheny River water, is now in operation. The plant consists of a settling basin 27 x 25 feet in area and $7\frac{1}{2}$ feet deep, also two sand filters, each with a surface area of 12x24 feet, or .0066 acres. The walls and bottom are built of Portland cement concrete. The whole arrangement conforms on a small scale to about the design that would be adopted if a large permanent municipal plant was built. It is a practical object lesson, to show what can be done toward purifying the river water in its various stages, showing the cost of maintenance and the best methods of operation,

The settling basin has a capacity of 33,000 gallons, or sufficient to allow twenty-four hours' sedimentation, with a maximum flow through one filter of 5,000,000 gallons per acre per day.

Taking the present consumption of water by Pittsburg to be 50,000,000 gallons per day, it would take a 10-acre plant to supply the city.

NOT IN THE ASPHALT TRUST.

All reports to the effect that the Alcatraz Company has sold out its interest to the Trinidad-Bermudez asphalt combine are absolutely untrue. Such reports have been put into circulation by interested parties for the obvious purpose of leading city officials and taxpayers to believe that genuine competition could not be obtained from contractors using Alcatraz asphalt. The Trinidad-Bermudez trust is being forced down to reasonable prices in a great many cities by the competition of the Alcatraz people, and the trust contractors seem to have an utter disregard for the truth in their attempts to discredit the Alcatraz Company. The trust is losing a great deal of business and a large proportion of its fancy profits since it has been forced to meet the Alcatraz people in actual competition. The time when the trust can fool city officials and taxpayers into the belief that its asphalt is the only fit material for street paving has passed.

GLASGOW: ITS MUNICIPAL ADMINISTRATION.

ARTICLE IV.—CITY IMPROVEMENTS.

In considering the municipal government and progress of the city of Glasgow, there is no more instructive chapter, amid much that is varied and interesting, than the history and development of what is popularly known as "The City Improvement Trust." Its inception was the inevitable outcome of the rapid advancement of a great city. The early history of Glasgow, or as it has been recently described, "The Dark Seaborn City," which dates back to the days of the good Saint Mungo (its patron saint), is lost in the mists of antiquity. Founded, or supposed to have been founded, in the year 560 A. D., its growth and progress were slow; and for several hundred years the city, or town, as it then was, pursued an even and uninteresting history. But a century ago Glasgow began to make progress. Bounded on every side by rural surroundings, these were soon included in the rapidly extending city. For the natural developments caused by greatly increased commercial activity, and consequent increased population, the city found itself in almost every way unprepared. Every available inch of building ground had been used up, and what had been originally large and roomy houses were divided and sub-divided to meet the wants of the ever-increasing population, and the result was that where hitherto only one family had found an abode, then eight, ten, or even a dozen found a habitation. There were no compulsory building regulations then in vogue to enforce ventilation and light being provided, and, as the sanitary condition of the city was then imperfect and the water supply not of the best, the conditions of life and surroundings, especially of the humbler classes, left much to be desired. As a result, a state of congestion ensued. In the old town there were narrow streets, with crowded tenements, having dark and unsightly entrances, and these were literally swarming with a living population. Within a very small area in the vicinity of Glasgow Cross (or central district of the city) nearly 80,000 persons were crowded together in an environment totally unfit for human habitation. It may be appropriate here to quote the description of this district of the city by one who was at that time a high civic authority in the city:

From each side of the Gallowgate, High street, Saltmarket, Trongate, etc., there are narrow lanes or closes running like so many rents or fissures backwards to the extent of 200 or sometimes 300 feet, in which tenements of three or four stories stand behind each other, generally built so closely on each side that the women can either shake hands or scold each other, as they often do, from the opposite windows. When clothes are put out from such windows to dry, as is usually done by means of sticks, they generally touch each other. The breadth of these lanes is, in most instances, from 3 to 4 feet, the expense of the ground having at first induced the proprietor to build on every available inch of it. Throughout the whole of these districts the population is densely crowded. In many of the lanes and closes there are residing in each not fewer than 500, 600 or even 700 souls, and in one close we observed thirty-eight families occupying one common stair. In the Tontine close there are nearly 800 of the most vicious of our population crowded together, forming one immense hotbed of debauchery and crime.

Another outstanding feature of the condition of the humbler classes at that time was the abnormally large number of common lodging houses which then existed in this part of the city. In the wynds, closes and narrow lanes there were hundreds of such dwellings, where the poor herded together like beasts, and in a manner the mere mention of which is repellent to all modern ideas of civilization. The common decencies of life were daily and almost hourly outraged, and no precautions were taken against the spread of disease. In these lodging houses no attempt was made to separate the sexes, and the consequence was that immorality was rampant. In addition to this the death rate was excessively high. No statistics are available, but it is quite within the mark to say that in this part of the city it was at least 55.2, and every facility was given for the transmission of infection.

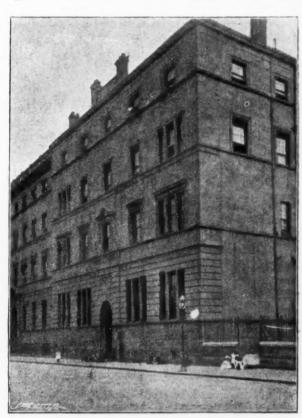
The first effort made to remedy the existing condition of things was a purely private one, outside of civic circles, and it was undertaken in a spirit of disinterested Christian philanthropy. A number of prominent citizens associated themselves with the object of acquiring some of the most dilapidated properties in the city, for the purpose of rebuilding them and remodelling the entire area in which they were situated. Their laudable efforts were not rewarded with the success they deserved, the principal hindrance being the exorbitant value placed upon these properties by their owners. But the united efforts of these public-spirited citizens accomplished one good result, and paved the way for what followed. Public attention was concentrated on the social evils in their midst, and it was conclusively demonstrated that Parliamentary authority must be obtained before anything in the nature of a social reformation could be accomplished. A decided feeling in favor of a city improvement act became universal, and accordingly, in the year 1865, the corporation began to take the preliminary steps which ultimately led to the prosecution of the measure (now known as "The Glasgow City Improvement Acts") before Imperial Parliament.

The act proceeded on the following narrative:

That various portions of the city of Glasgow and the buildings thereon are so densely inhabited as to be highly injurious to the moral and physical welfare of the inhabitants, and many of the thoroughfares are narrow, circuitous and inconvenient, and that it would be of public and local advantage if various houses and buildings were taken down, and other portions of the said city reconstituted.

The measure met with little or no opposition, and it received the royal assent on June 11, 1866. The compulsory powers for acquiring the insanitary areas in the city, which the act conferred upon the corporation, were at once put into operation by them, and although the act prescribed a period of five years within which the properties affected had to be acquired, it is a tribute to the earnestness and zeal of the members of the corporation of that day that, no sooner had they the power, than they at once set in motion the machinery authorized by the statute, the funds for which purpose were to be found by an assessment which the act authorized them to levy, on the rental of the city to an extent not exceeding 6d. in the pound for the first five years, and 3d. per pound during the succeeding ten years. Property was purchased within the compulsory areas at a cost of £1.616,000 sterling, and outside of these areas at the price of £125,000 sterling, and an additional sum of £103,000 was expended in the laying out and formation of streets and squares and forming and covering sewers. Another scheme necessitating an outlay of £40,000 sanctioned by this act was the acquisition of a public park, as nearly contiguous as possible to the district proposed to be renovated, but this will be referred to when the subject of public parks and open spaces comes to be dealt with.

The first meeting of the corporation convened to carry out the act was held two months after the royal assent had been received, and at it the work involved was divided between two committees, to one of which the duty of purchasing property was allocated, while to the other was given the difficult task of carrying out all the other



A MUNICIPAL LODGING HOUSE, GLASGOW. 206

objects of the act. It is a significant fact that the chief magistrate of the city was chosen as chairman of both these committees, and it was resolved at that meeting to fix the assessment at the maximum amount allowed by the act, 6d. per pound. This assessment, it is rather anomalous to find, was leviable only on the occupiers of lands and heritages, and no part of it was exigible from the owners of the land. Human nature is the same in all ages and in all parts of the world, and as the result of this in:position, it was therefore not surprising that a loud outcry should be raised by the man in the street, who now realized that he was to pay for the improvements sought to be effected. The rate-paying community, who have ever a short memory, soon forgot the patriotic feelings with which they had espoused the proposed changes, and so incensed were they that at the next municipal election they ousted from his position at the civic board the chief magistrate, who had all along been an active supporter of the new improvement measure.

In the year 1870 the corporation model lodging-house scheme was inaugurated. The corporation were compelled to launch into this enterprise to provide shelter for those who had been ejected by the building operations of the Improvement Trust. Two of these homes were built in the year last mentioned, one for men and the other for women. The success which attended the corporation's efforts justified them in extending their operations in this direction, with the result that in the course of a few years some seven or eight of these homes came into existence, unitedly giving nightly accommodation to about 3,000 lodgers. For a sum of 3½d. or 4½d. each lodger has the right to a bed and shelter for twenty-four hours, and he has at his disposal the use of the cooking apparatus and washing house of the establishment, and in every one of these homes there is a shop or store where the necessaries of life can be purchased by the inmates at a very cheap rate. The distinction in price for beds is explained by the fact that an additional quantity of bedding is given at the higher rate.

On the ground or street floor of these establishments are the dining and recreation halls, the kitchen and the superintendent's house and office. On the other floors the sleeping apartments are situated, the ceiling averaging from 10 to 14 feet in height, and the cubicles formed in rows by wooden partitions, about 7 feet in height. The beds are required to be vacated by lodgers every morning at 8 o'clock. The corporation have looked well to the sanitary requirements of the inmates, each lodger having been allowed a space of nearly 400 cubic feet. The result of the corporation embarking as lodginghouse keepers has been that the old-fashioned lodging house has almost, if not altogether, disappeared. The financial success of the corporation's new departure led to the establishment of many competing institutions conducted on similar lines, several of which were started by those who had held the position of superintendent of the corporation houses. It is a signal tribute to the character and success of the Glasgow lodging houses that several years ago a member of the English aristocracy, the Right Honorable Lord Rowton (who was at one time the intimate friend and private secretary of the late Lord Beaconsfield, Prime Minister of Great Britain), sought to augment his income by establishing in various parts of London similar institutions upon lines identical with those in Glasgow.

Many of the inmates of these homes cannot be described as migratory, and they remain year after year under the roof provided for them by the corporation, to which they have become attached notwithstanding the fact that several of the establishments erected by private enterprise are more modern and are conducted on less stringent lines. They recognize that the corporation has their best interests at heart and endeavors to demonstrate to them that life is worth living by helping them to spend their leisure hours profitably and well. For this purpose, and with the co-operation of a large number of Christian-hearted citizens, they inaugurated during the winter months a series of concerts, lime-light lectures and dramatic entertainments, which are given without fee or reward, and it is significant that all classes of the citizens

(to the number of 700 in one year alone) have participated in this good work. Nor is the spiritual welfare of the inmates neglected, and one striking feature of the management is that the homes are thrown open every Sunday to the Young Men's Christian Association and kindred bodies, who conduct religious services with the inmates, and it is no uncommon thing for the address on these occasions to be given by a magistrate or a member of the city corporation.

The accounts of the Improvement Trust for last year showed that the drawings from the lodging houses amounted to £13,532 18s. od., against £12,667 os. 7d. for the year previous, showing an increase of £865 17s. 5d., but it is right to state that part of this increase is accounted for by additions which were made to two of the homes during the currency of the year. The administrative charges were £9,317 18s. 1d., being an increase of £1,326 os. 1d., to which all the houses contributed in substantial measure. The net return from the lodging houses was £3 17s. 7\frac{3}{4}d. per cent. on the gross capital cost, and £4 7s. 7d. per cent. on the net cost, as reduced by the yearly depreciation allowance.

It may not be out of place here to refer to what is sometimes spoken of as the moral aspect of the lodging-house scheme. It is frequently urged that these homes provide an inducement for husbands to desert their wives, and *vice versa*, but be that as it may, it is no reason why this class of the community should not be as well housed as possible.

It may be interesting to add that the total capital cost of building, furnishing and equipping these lodging houses has amounted to over £100,000 sterling.

We proceed now to refer to another important department of the work of the city improvement department, viz., the municipal family home. Its inception was due to an ex-member of the corporation, ex-Bailie Burt, but but so far it has not proved a conspicuous success, but like all innovations the public mind requires to be educated up to an appreciation of its value. It proposes to meet the needs of a very large class in every community, viz., poor workingmen who have been widowed, with the responsibility incident to the up-bringing of several young children, or the still sadder case of poor widows who are similarly situated and who have to go out into the world to earn their daily bread, and thus leave their offspring to the tender mercies of their neighbors. As may well be understood, the children of this class are in a most pitiable plight, and notwithstanding the well-meant efforts of the officers of the school board and of the commissioners for the prevention and repression of juvenile delinquency, such children are apt to become demoralized, and, unless properly looked after, almost certain to ultimately swell the ranks of the criminal classes. Apart, therefore, from moral considerations and the immediate chance of financial gain, it is a laudable effort on the part of the corporation to provide for a class hitherto neglected.

The new venture may best be described as a people's boarding house. It has accommodations for 160 adults, and also for three children with each adult, who have allocated to them a separate apartment, which is isolated

from the rest of the house, thus securing distinct privacy to each family circle, and in this way maintaining the idea of family life. Each of the 160 apartments which the house contains is heated by hot water and lighted by electricity, so that the accumulation of dust and dirt is thus reduced to a minimum. During the absence of their parents at their lawful occupations the children are cared for, and those of them that are of school age are sent to school, while the younger children are tended by the staff in the home, where a crêche, a recreation room, a playground and a dining room and accessories are all provided. It will thus be noticed that the administration of the home provides for the children being under the control of the officials of the home in the absence of the parents, and in the evening amenable to the discipline of the parents themselves.

The home is not to be regarded in the light of the ordinary charitable institution, but is meant to provide the best home and creature comforts to a class who have tew or none, and it desires also to enable them to live on economical lines. Applicants for admission are required to fill up a form detailing the following particulars: Age, occupation, date of husband or wife's death, etc. They must also furnish the officials with references as to their character. The charges are as follows:

		week.
For a mother with one child	35.	2d.
For a mother with two children	38.	10d.
For a mother with three children	45.	od.
Men are charged 1s. more.		

The tariff for board is as follows: Breakfast, 2½d.; dinner, 4d.; tea, 3d. Children are boarded by the week at the following rates:

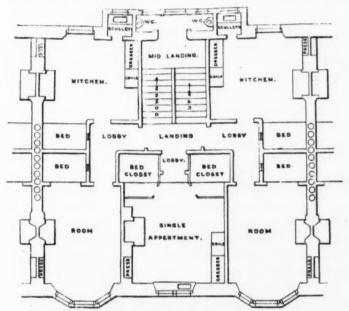
		week.
For one child	IS.	. 10d.
For two children	3s.	2d.
For three children	45.	od.

At first the home was under the charge of a lady superintendent, but the duties devolving upon her were found to be so arduous that she had to resign, and the corporation have now appointed a married couple.

As regards the building operations of the improvement department, it may be stated that this branch of work was to a certain extent forced upon the corporation by reason of the fact that after having acquired and cleared off their insanitary burden, the vast extent of property referred to previously, they were unable to obtain purchasers for the ground at a price which would involve the city in no financial loss, and who would at the same time come under obligation to erect buildings in accordance with the enlightened views of the corporation, and thus the civic council were compelled to enter the property market, and, as a recently deceased magistrate somewhat facetiously said, "put their hand in the mortar tub." Very few of the tenements of the department were erected prior to 1888, so that it has been within the last decade that the corporation's building operations have become a reality, as within that perior they have erected dwelling houses at a cost of £130,000. houses are for the most part single apartments, and accommodation is provided for a population of about 6,000 persons. The whole of the property is under the control of a general manager, who is assisted by two caretakers, who

make regular visitations of the household property, with a view to seeing that they are kept by the tenants in a sanitary and comfortable condition. The buildings are situated in what was once classic ground—the Saltmarket, High Street and Trongate—places which have been immortalized by Sir Walter Scott as the haunts of the famous Bailie Nicol Jarvie. In the main streets shops occupy the ground floor, while the dwellings overhead, which in some cases are above the standard required for laboring men, are occupied by mechanics, policemen, clerks and small shopkeepers. The poorer classes are also being provided for, the rent in some cases being as low as £4 10s. a year for a good single room, and £6 16s. for a two-roomed house.

The tenements are all substantially built of stone, and the most modern improvements have been introduced into them. The one-roomed house is 12 feet 6 inches by 15 feet, and is 10 feet high. A screen of corrugated iron



Interior Arrangement of Municipal Tenement. 207

7 feet high shuts off part of the room, and this portion is sub-divided into two bed closets. A laundry and baths for the use of the tenants have been erected by the corporation, and for the small charge of I penny per household the women have the use of a good laundry, while a recreation room adjoining is at the disposal of the children while their mothers are busy at work in the laundry. When the laundry is not being used by tenants of the corporation it is open to others.

It is significant of the success of the whole operations of this department of the corporation's work that at the present time it is carried on with the aid of the infinitesimal rate of a farthing per pound. During the thirty years that the department has been in existence a sum of £2,000,000 sterling has been expended in the purchase and improvement of lands and buildings. New buildings, which include the erection of the lodging houses, have cost £240,000. The lodging houses alone have brought a return of 5 per cent. on the capital invested on them, while the household tenements have been equally profitable. The department has disposed of property to the value of £1,000,000 sterling, and at the

present moment it holds property to the value of £700,-000. It is estimated that the amount drawn from rates during the last thirty years is close upon £600,000.

The improvement department, like many other departments of the city's service, which was inaugurated without any idea or prospect of pecuniary gain, but in the best interests of the citizens, and with a view to raise the moral tone of society, has resulted not only in achieving the objects desiderated, but has also proved a financial success. Encouraged by the beneficent results which have attended their past efforts, the corporation are at present promoting a bill in Parliament to confer power upon them to deal with additional insanitary areas, in order to secure for the inhabitants of these properties the same advantages which have accrued to those in the properties already dealt with.

The city improvement department is at present under the convenership of a well-known and public-spirited citizen, Bailie Samuel Chisholm, to whose untiring energy and zeal the department owes much of its existing success.

[These articles on Glasgow's municipal administration will be continued in CITY GOVERNMENT until every department of that model municipality has been thoroughly treated. The author is a prominent city official of Glasgow, one in a position to deal with the subject with intelligence and authority.—Editor CITY GOVERNMENT]

STREET SPRINKLING FOR CYCLISTS.

The board of administration of Cincinnati has favored the wheelmen by adopting the following amendment to the by-laws, rules and regulations of the water department:

It shall be unlawful to sprinkle by means of sprinkling cart, hose or other apparatus, the entire width of any street, avenue, thoroughfare or public way of the city of Cincinnati that is paved with granite, asphalt or brick, and is 30 feet or more in width between curbs, except in manner as follows:

On streets, avenues, thoroughfares or public ways paved with granite or brick that are 30 feet or more in width between curbs, a dry strip shall be left in the centre thereof of 6 feet in width.

On streets, avenues, thoroughfares or public ways paved with asphalt that are 30 feet or more in width, not more than one-half of such street, avenue, thoroughfare or public way shall be sprinkled at any one time, and a sufficient time shall elapse before the other half of such street, avenue, thoroughfare or public way shall be sprinkled, so that both sections shall be in proper condition for use for all purposes and at all times.

Street sprinkling contractors who violate this regulation will have their water permits revoked.

A GOOD THING IN GARBAGE.

The newspapers of Syracuse, N. Y., are censuring the board of health for letting what they call a bad garbage contract. John Dunfee is the name of the gentleman who secured the contract, which is for ten years, at the rate of \$26,000 a year. Mr. Dunfee is required only to dispose of the garbage after it is delivered to his plant by the city. The cost to the city of collecting and delivering the garbage will be about \$12,000 a year. It is stated that Mr. Dunfee will derive an additional income of about \$31,000 a year from the sale of the by-products of the garbage, which he will reduce by the Holthaus system. It looks very much as though Mr. Dunfee has a good thing, and will push it along.

CITY GOVERNMENT.

A Monthly Magazine for City Officials, Tax Payers, and others interested in municipal affairs.

PUBLISHED BY

CITY GOVERNMENT PUBLISHING COMPANY.

150 NASSAU STREET, NEW YORK.

WESTERN OFFICE, 358 DEARBORN STREET	Γ, -	-	-	CHICAGO.
New England Office, 911 Carter Buil	LDING,	-	-	Boston.

B. F. GILKISON,		-						PUBLISHER
H. J. GONDEN,	-	-	-	-	-		-	EDITOR.

TERMS OF SUBSCRIPTION.

In the United States and Canada	per annum,	\$3	00
In all Foreign Countries	6.	4	00

Subscriptions payable in advance, by check, P. O. money order or express money order, to order of CITY GOVERNMENT PUBLISHING Co.

RATES FOR ADVERTISING SPACE QUOTED ON APPLICATION.

EDITORIAL NOTICE.

Papers and correspondence on all subjects of interest to our readers are cordially invited. Our columns are always open for the discussion of municipal affairs.

Special effort will be made to answer promptly and without charge any reasonable request for information which may be received from our readers and advertisers, answers being given through the columns of CITY GOVERNMENT when of general interest; otherwise by letter.

Municipal news and information regarding changes of city officials will be greatly appreciated.

All matters intended for publication in the current issues must be received not later than the tenth day of each month.

Address all communications to

City Government Publishing Company, 150 Nassau Street, New York.

NOTE AND COMMENT.

College professors and doctors of divinity, of law, and of medicine, have undertaken the reformation of municipal government in this country. They have had a national organization for several years, and they have met each year for the purpose of advancing their theories for the correction of all our municipal ills and evils, but the good they have accomplished has been far from commensurate with their efforts. It is both unjust and unkind to attempt to belittle the efforts of our "good government clubs" and "civic federations," for their efforts have been well meant, and have not failed of results. It is to this class of citizens that the honor of having incited a general interest in municipal affairs must be accorded. The good government organizations have accomplished much, but they have failed to bring about an improvement in the practical affairs of more than a very few of our municipalities. They may be credited, for instance, with the present administration of New York city, which has shown practical improvement in many branches of the public service. But if the good government people are to be given the credit for placing Mayor

Strong and his subordinates in power, we must accord even greater credit to the officials themselves for their studious and conscientious efforts for improvement in departmental administration. Whatever has been done for the betterment of the municipal service in New York has been accomplished by the officials themselves. Colonel Waring possessed the peculiar knowledge and conceived the new ideas which enabled him to clean the streets and keep them clean. It is more than probable that his predecessor, lacking these fitting qualities, would have found it utterly impossible to clean the streets, even if he had been disposed to do so. It is easy enough, however, for any man of executive ability to perform this service now, because he may have Colonel Waring's knowledge and ideas to work upon. In fact, the methods of New York's present street cleaning department have already been copied by many cities throughout the country with good results. Thus it is that city officials may profit from the knowledge and experience of their contemporaries elsewhere. While New York may give other cities valuable information on the subject of street cleaning, other cities may give New York ideas for improvement in other departments of municipal work.

The asphalt combination, which has been bleeding the property owners of Rochester, N. Y., is to receive an investigation at the hands of the council committee on public improvements. Rochester is one of those cities in which the contracting board has seen fit to permit the use of nothing but Trinidad Lake asphalt, thereby shutting out competition, and allowing a combination of local companies for the purpose of keeping up prices. A favorite and successful scheme of the Rochester combine is to secure majority petitions by making private contracts with a favored few of the property owners for re-This is an old dodge of corrupt paving contractors, and the practice should and will be stamped out by city councils sooner or later. This system of extorting money from the many to pay tribute to the few is so palpably unjust that it will not be tolerated.

There is an interesting asphalt fight on at Binghamton, N. Y., in which the Warren-Scharf and the Utica companies are the combatants. It happened that the Warren-Scharf people put in the lowest bid for paving Main and Washington streets, the figure being \$1.69 per square yard, but the bid was irregular, because it was not signed by two freeholders of Binghamton, as sureties. The council took advantage of this point to reject all bids and readvertise, after they had been assured by Charles I. Williams, of the Utica company, that his next bid would be lower than \$1.69. Mr. Williams is making a fair, open fight against the asphalt ring at Binghamton, and even if he does not secure the contract the taxpayers will be the gainers in the end.

A charge of favoritism was recently lodged against the Detroit board of public works. Commissioner MacVicar appeared before the investigating committee with facts and figures which proved conclusively that the charge was without foundation, and furthermore he took advan-

tage of the opportunity to show how the board had saved money for the taxpayers since 1890. As to street paving, Mr. MacVicar submitted a statement showing the average prices paid during the past seven years, as follows:

Kind of Pavement. 1891. 1892. 1893. 1894. 1895. 1896. 1897. Cedar on plank. ...\$1.76 \$1.79 \$1.74 \$1.79 \$1.43 Cedar on concrete. ... 1.89 2.05 1.87 1 61 1.44 1.25 Brick on concrete. 2.65 2.77\frac{1}{2} 2.18 2.18 2.02 1.73 1.65 Asphalt on concrete. 2.93 3.16 $2.97\frac{1}{2}$ 2.83 2.84 2.55 1.91 Cobble ... 1.06 1.13 1.17 1.09 1.00 1 00 .59

Thus it is shown that since Mr. MacVicar has been on the board of public works the prices of paving have been almost cut in two. Certainly this is a result which could not be obtained by a board addicted to playing favorites.

Thomas Hanrahan, a coal dealer and a former councilman, has been working the balance bid game on the fire commissioners of Buffalo. The report of the council investigating committee explains how the job worked. It says: "It will be noticed that the estimate of the amount of soft coal to be furnished as per advertisement of the department aggregated 2,200 tons, but it appears that in the last preceding year only 1,375 tons had been delivered, and as late as the middle of June of that year 100 tons were delivered, and it is likely there was a considerable supply on hand at the beginning of the present fiscal year. This Mr. Hanrahan was aware of, having supplied the coal for two years just prior, and in making his bid of 'first 1,000 tons steam lump at \$2.50, last 1,000 tons at 50 cents' he rightly conjectured that his bid if accepted in that form would give him an apparent advantage of \$1,500 in a comparison with the others. He would not be called upon to furnish any of the 50cent coal, but would be afforded an opportunity of supplying all the coal that would actually be used at prices considerably higher than the quotations of any of the other bidders. The bid was clearly a juggle and should have been rejected by the commissioners as 'informal.' In the opinion of your committee the city has a right to demand the delivery of this 1,000 tons of steam coal at 50 cents per ton, as the advertisement for proposals calls for 'about 2,000 tons' steam lump and 'about 200 tons' select lump. It does not state that the coal is to be used within, or the contract limited to, a year, or that the amount furnished is to be confined to the actual needs of the department for the year."

NIAGARA FALLS PAVING DECISION.

The Niagara Falls paving case has been decided by the referee, who holds that the council and board of public works have a legal right to exercise their discretion in the matter of awarding contracts for public work. Thus it is that the council and the board are legally upheld in their action of letting a paving contract to the Barber trust at \$12,000 more than the amount bid by another company. Former Judge Lewis, who acted as referee in this case, while he held that the discretionary power of the council entitled the taxpayers to no relief, decided every other point involved against the Barber trust. He finds that Alcatraz asphalt is as good as any or paving purposes, that a secret bargain existed by

which the Bermudez people refrained from bidding at Niagara Falls for a consideration paid by the Barber Company, and that the Barber people have monopoly protection in Trinidad and Bermudez asphalt. In his decision the referee says:

I am satisfied from the evidence that Alcatraz asphalt in use by the Utica company is equal in quality with the Trinidad or Bermudez asphalt, and that the company is well equipped and competent to lay good pavements, and, had the contracts in question been awarded to it, it could have performed them.

The evidence tended to show that with the city engineer, the board of public works and with some members of the common council, the Utica company was an unwelcome bidder. A merchant of the city of Niagara Falls, before the opening of the bids, inquired of one of the members of the board of public works where he could obtain the necessary information to enable a friend of his to bid upon the work. The member replied that if it was proposed to bid upon land or Alcatraz asphalt, the board would not accept the bids, for they would allow nothing but Trinidad Pitch Lake, and he advised him not to interfere in the matter.

Were I vested with legislative powers in the matter, I should promptly set the procedings aside and readvertise for bids, and should see that the notice for proposals for the work was so worded that the widest and freest latitude should be given to the bidders. I should have the notice so worded that no member of the board of public works or of the common council could raise any question as to their right to be considered. But I am not clothed with legislative power in the premises, but am acting judicially, and am bound by the settled rules of law governing the case, and being satisfied that the board of public works and the members of the common council were not influenced in their action by collusion or corrupt motives, but were exercising a discretion vested in them, even if unwisely exercised, I do not see how their decision can be disturbed.

SALARIES OF CITY TREASURERS.

EDITOR CITY GOVERNMENT:

Can you give me figures showing the salaries paid the treasurers of some of the larger cities of the United States, say cities with a population of 75,000 and above?

We give salaries of city treasurers, and mention extra compensation in cases where it is paid, as follows. Worcester, Mass., \$3,400; Providence, R. I., \$4,000; Denver, Col., \$5,000; Cleveland, Ohio, \$4,000; Toledo, Ohio, \$500, city treasurer is also county treasurer and receives salary and fees as same, also I per cent. on special assessment collections; Nashville, Tenn., \$2,000; Minneapolis, Minn., \$5,000; Detroit, Mich., \$4,000; Charleston, S. C., \$2,000; Omaha, Neb., \$4,000; Grand Rapids, Mich. \$2,500; Dayton, Ohio, \$500 and a percentage on all general tax collections and on all special assessments; Kansas City, Mo., \$3,600.

-The wheelmen of North Adams, Mass., have petitioned the council to tax bicycles at \$1 a year, and devote the revenue thus derived to the construction of bicycle paths.

—Mayor Harrison intends to have established a number of small parks or playgrounds throughout the congested portions of the city of Chicago before his term of office expires. He believes there should be breathing places in the poorer sections of the city where children may play without the risk of being killed by trolley cars or heavy trucks and without having to pay car fare to reach them.

BALTIMORE'S OBSOLETE CHARTER.

Gen. F. C. Latrobe, seven times mayor of Baltimore, says that city needs a new charter. "I consider our present charter obsolete," he says. "It was made more than 100 years ago, and every city of any size in this country has had several modernized and acceptable charters in that time, while we have contented ourselves with tacking on provision after provision, idea after idea, policy after policy, until the whole is a conglomerate patchwork. Many of our city departments are antiquated, many of our methods of government far behind the time.

"The people of Baltimore want a new city charter, if for no other reason, because the State has imposed upon this municipality long enough. We have grown beyond a desire to have the mere necessities of municipal life; we want the luxuries of local government—the best policing, smooth streets, adequate lighting, thorough fire protection. All these things cost money, and if we are to get them they will have to come in the future from other funds than thosse provided by direct taxation, for our tax rate is about as high as can be endured. Chicago has all these luxuries, but it gets them by being practically independent of the State of Illinois and by receiving an income of some two millions annually from various kinds of licenses.

"Why cannot Baltimore have the same sort of income? The answer is because the present charter gives too much of the money of Baltimore to the State of Maryland. The liquor licenses have been a godsend to Baltimore taxpayers in the past few years, because the city's share has amounted to \$300,000 or so annually. Why should not the city also have that portion of these city licenses which goes to the State? City taxation supports the police department, which exercises supervision over the saloons, and the money of Baltimoreans is spent in these saloons.

"The big sums which are annually collected through traders' licenses now go entirely to the State. That should not be. Our city government should have them as a source of income. So, too, should it be with the thousands which are annually paid for records and legal papers in the various court clerks' offices. The city pays the salaries of these clerks and the expenses of their offices, but the money which is made in the offices goes entirely to the State. There are other instances, too, just as glaring."

NEW CREMATORY AT WILMINGTON.

The new Dixon garbage crematory at Wilmington, Del., was officially tested July 28. The furnaces were built to burn 80 tons of garbage in twenty-four hours, but on the day of the test only 32 tons were collected, and this amount was consumed within ten hours, although the fires had not been started in advance. The showing was very satisfactory to the city officials who witnessed the test. The new crematory building is 40 x 90 feet, one story high, and has two furnaces, each about 77 feet long. Soft coal is used for fuel.

TELEGRAPH SUPERINTENDENTS' CONVENTION.

One of the most important conventions of the year will be that of the International Association of Fire and Police Telegraph Superintendents to be held at Nashville, Tenn., September 14 and 15. Of the various branches of municipal work, that of constructing, maintaining and operating fire and police telegraph systems is by no means of minor importance. Numerical strength, careful training, discipline and conscientious effort in a fire or police force can all be nullified by a telegraph service in any way inadequate to the demands made upon it. In the work of police and fire departments, promptitude is the first essential to efficiency, and to attain the highest degree of alacrity is to attain the



F. C. MASON, BROOKLYN, PRESIDENT. 2.8

highest degree of efficiency. To secure prompt action on the part of policemen and firemen in the work of protecting life and property it is necessary to have a faultless telegraph service. In this day of the rapid development of electrical construction, the superintendents of our municipal telegraph systems must be progressive in order to keep in touch with the latest devices for the improvement of the important service entrusted to their care. Nothing will tend more to inject this necessary progressive spirit into the superintendents than a healthy national organization, and for that reason alone the coming convention at Nashville should be largely attended.

The programme for the convention has not been completed, but among the papers to be read are "Modern Construction and Maintenance of Wires for Municipalities," by William Brophy, chief electrician of the city of Boston, and "Storage Batteries as Applied to Fire Telegraph Systems," by J. W. Aydon, superintendent of fire telegraph, of Wilmington, Del.

The call for the convention sent out by President F. C. Mason, of Brooklyn, says:

In accordance with resolution passed by the executive committee, at its meeting held on May 15, the second annual meeting of the "International Association of Fire and Police Telegraph Superintendents" will be held at Nashville, Tenn., on Sep-

tember 14 and 15, 1897, at 10:30 A. M. Headquarters at the Maxwell House. It is hoped that a large attendance will be present, as business of the utmost importance will be transacted. Valuable papers will be read touching upon many important subjects connected with our daily business experiences. Officers are to be elected for the coming year, and, to a great extent, the future welfare of the association depends upon a successful meeting at Nashville. It is to be hoped that all will go who can. A large number of superintendents who were elected to membership last September have promptly paid their annual

Lewis, director-general of the Tennessee Centennial Exposition, and the daily press of Nashville.

Among the large number of letters received by President Mason relative to the coming convention is a very entertaining one from W. A. Fraser, city electrician of Dallas, Tex., who writes:

If you will glance at the map of the United States you will notice, a small corner in the south of same, marked "Texas," and although it only covers about 265,000 square miles and



M W. MEAD, PITTSBURG, VICE-PRESIDENT. 209



ADAM BOSCH, NEWARK, TREASURER. 210



S. Lemon, Baltimore, Secretary. 2//

dues for 1896 and '97; there are still quite a number who have failed to do so. To those who have failed to respond to the secretary's notices requesting payment of yearly dues, amounting to only \$5, I earnestly appeal. Kindly notify me without delay if you desire to retain your membership in this association, which is sure to be of great value to you in the future.

has a population of nearly 3,000,000, and was only a few years ago (comparatively speaking) the home and rendezvous of outlaws and desperadoes, and its plains were covered with wild cattle herded by the famous cowboys armed with a pistol in one hand and a lasso in the other, with cartridges surrounding their body, and spurs on their boots that look like a cir-



J. W. AYDON, WILMINGTON, DEL. 2/1



WILL Y. ELLITT, ELMIRA, N. Y. 2/3



WILLIAM BROPHY, BOSTON. 24 4

This money is to be used for stationery and printing papers read at Nashville, the same to be distributed among our members. "The Old Time Telegraphers" and the United States Military Telegraph Corps meet in Nashville at the same time set for our meeting. You are sure of having an instructive and enjoyable time.

The convention goes to Nashville upon urgent invitations from Hon. P. Turney, Governor of Tennessee; Hon. Wm. M. McCarthy, mayor of Nashville; E. C. cular saw used on rough timber in a saw-mill; but which now stands a peer to any State in the Union, and in place of her wild cattle and cowboys roaming the plains, there have sprung up some of the finest and most substantial business houses, mills and factories, that can be found in any State in the Union.

From the metropolis of this grand State I send you greetings. I wish you success, and I hope you will get together and each receive the great benefits that are bound to be derived from such a meeting. If I can be of any service to you

in this section, command me. I will be with you at Nashville if alive.

William Brophy, chief electrician of Boston, writes:

A great deal depends on the outcome of the next meting, for if it proves to be what it should be, the future of the association is assured. I feel now and have for a great while that city and town authorities do not realize the importance of the fire and police signal systems or their superintendents. The superintendent of either system must be a man of intelligence, be competent in every branch of his business, honest and fearless. The faithful, competent superintendent should be as secure in his position as the Rock of Gibraltar, and never be removed, no matter how often changes may take place in the administration. Depend upon it, I will contribute my small mite toward the success of the next meeting.

At a recent meeting of the executive committee of the association it was unanimously voted to recommend an amendment to the constitution, which, when adopted, as it will be without doubt, will make all the municipal officers, whose duty it is to enforce the laws and ordinances governing the generation and distribution of electrical energy eligible to membership.

The city of Omaha, through Edward F. Schurig, city electrician, has already put in a strong plea for the 1898 convention.

INCREASED REVENUE, FREE SERVICE PIPES AND FILTRATION.

BY DOW R. GWINN, SUPERINTENDENT OF WATER WORKS, QUINCY, ILL.*

In all branches of business the question that frequently suggests itself is: "How Can the Revenue Be Increased?" and I have no doubt that this subject is full of interest to those who are in the water business. There is one fixed charge to be met, the interest on capital invested, besides the ordinary expenses of operation, and with most private companies a good round sum for taxes. On the other side, there is the hydrant rental and receipts from private consumers. The tendency is for city officials to order as few hydrants as possible and cut the rate down at the same time-that is, if they are in a position to do so. Then with private consumers there is a certain class of business that can usually be counted on, such as factories, stores, office buildings, livery stables and dwellings with modern plumbing. When these are all supplied the receipts do not increase as rapidly as formerly, except in cities that are growing in population and extending their limits, unless an extra effort is made to get customers to whom some inducements must be offered.

The city in which I reside was nearly as large when the water works were completed as it is to-day, and each house was provided with a cistern or two that contained. according to the owner, the purest of water, although some had not been cleaned in a score of years. The small householder would get along after a fashion with his cistern, and unless he would rebuild or was very prosperous, he would not go to the expense of laying a service pipe. We wanted to increase our revenue and decided to offer a special inducement to this class of people to become customers. First we made our rates

*Address delivered at Denver Convention of the American Water Works Association.

for family or domestic use very low, \$2.50 for two-room house, \$3.60 for three rooms, \$4.50 for four rooms, and \$5.40 for a five or six room house, and offered to lay the service pipe to the curb line free of charge, if the owner of the property would sign a contract to use water and pay the rate for his house, regardless of the size, for a term of three years. The contract reads as follows: "In consideration that the water works furnish and lay at their own expense a service pipe and all usual and necessary appendages, from the street main to a point just inside the curb line in front of premises No. street, the undersigned hereby agrees that - will pay - water works the sum of - dollars per year - (less discount of 10 per cent, if paid on or before the 10th day of month when bills are due) for the period of three years for the privilege of using water at said premises for the following purposes only, viz.:

"The charge for water will begin at the time said pipe is laid by —— water works and water turned on it. In case of removal from above premises by the subscriber before the expiration of this agreement ——— liability under it shall cease."

The result was that many became customers who would not have done so if they had been compelled to pay the whole expense of laying the service pipe. Formerly a service laid from the main to a point, say 10 or 12 inches inside the fence provided with a yard hydrant, would cost the prospective consumer \$17 to \$20. Now he can get it for about \$7, an expense which can be afforded by even those in very moderate circumstances, and some who are starting new places save the expense of a cistern by accepting our offer. When the three years have expired, as a rule the consumer continues to pay for water, as he has become accustomed to the superior water which we furnish, and finds it easy to pay \$1.35 to \$2.70 once every three months. Frequently the rate is increased by adding sprinkling or if water was originally taken for sprinkling only the domestic is added.

Some of the members of this association will ask about manner and cost of laying service pipes, and I will answer that we have most of the work done by the plumber selected by the applicant to do his work, except where the main is being laid, when we do the work ourselves. We do not include the price of the corporation stop or the tapping of the main, because we always do that for any customer, free of charge. First, there is a piece of three-quarter inch strong lead pipe, 2 feet 6 inches wiped on coupling or corporation stop and brass soldering nipple, then sufficient three-quarter inch galvanized iron pipe to reach a point about 1 foot inside curb line where the curb cock is located, on which a curb or pave box is placed. The curb cock is of the pattern with tapering core or plug which does not stick and is always easy to turn.

Where the main is about 12 feet from curb line nearest the premises to be supplied the cost is \$5.25, and where it is about 30 feet the cost is \$7.25, or an average of \$6.25. The plumbers will not get rich at these prices, but when the work is done in connection with the extension of the service into the premises of the consumer they do not lose anything; at least they are anxious to do the work. When we do the work ourselves at the

time the main is being laid we can save about \$1 each service.

Take the average expense of a service laid to curb by plumbers at \$6.25; the interest on this investment at 6 per cent. is only 37½ cents per annum, which is a small outlay to secure a steady consumer, and in addition there is a point that should not be overlooked—that is, the good will of the consumer, who in many cases appreciates the fact that he has been treated generously.

Another way of increasing revenue, and by far the most important one, is to filter the supply before delivery to consumers. It is an undisputed fact that purchasers will buy more readily and pay more cheerfully for a firstclass article than for a poor one, and this applies to water as well as any other commodity. The time is coming when a system of filtration will be considered as necessary to a complete water plant as a pump, reservoir or standpipe. Personal experience has proven that our business has improved wonderfully since we began filtering water and laying service pipes to curb. The filtered water being desirable and far superior to cistern water, those who did not have it were inclined to become our patrons, and by making it easy for them to do so, by assisting them in getting service pipes at a small expense, naturally the business began to grow. A short description of our system of filtration may be of interest. First the water is taken from the Mississippi River at a point above the city, free from local contamination, delivered through a 30-inch conduit 1,500 feet long into a well, from which it is pumped to a settling basin 70 feet by 70 feet and from 7 feet 6 inches to 9 feet 3 inches in depth, where a large proportion of the suspended matter is precipitated, the clearest water flowing into a steel trough, which conveys the water to the effluent well, from which it flows by gravity to fourteen filter tanks made of cypress staves, the tanks being 12 feet in diameter. Here the water passes through about 4 feet of fine quartz and sand into a cemented basin and is then pumped into the mains and reservoir. A small pump delivers a solution of sulphate of alumina into the discharge pipes of the first pump, giving ample time for coagulation. When the river is soft, which is the case after heavy rains, we use lime water in the pump well, thus supplying carbonate of lime for the alumina to act upon. This has proven an economical measure, as less alumina is required when the carbonates are present in large quantities, and, compared with sulphate of alumina, lime is inexpensive. The river has been unusually high this spring, and the water was about as bad as it could be, laden with impurities of all kinds and very dark in color. yet with the use of lime water and about two grains of sulphate of alumina we were able to filter this water successfully and maintain the usual high standard. As a rule water consumers are inclined to find fault, but it is quite a common occurrence to have our customers praise the water furnished them. This means increased revenue, for a satisfied customer will tell his neighbors, and that helps to secure additional business. While the worst water we have ever had was filtered with the use of two grains of alumina per gallon, the average will be considerably below that figure, not more than one-half grain per gallon, which, at 11/2 cents per pound, is \$1.05 per

million gallons. Our average for four years was fourtenths grain per gallon pumped.

Now what is the effect of filtered water on typhoid cases? Several years ago there was an outbreak of typhoid fever in Quincy and an investigation was ordered by the city officials. The report of the investigation was as follows: "It is a bit peculiar that in seventeen of the nineteen cases of typhoid the source of water supply was cisterns; one of the remaining two came here sick from St. Louis, and the remaining one had used city water. This either speaks well for the hydrant water or is an argument against cistern water." The record for the year ended April 1, 1897, for the city of Quincy, Ill., was seven deaths, including the patients that were brought to the hospitals from the government works on the river below the city. Of this number of fatal cases only one was on premises supplied with filtered water, which is certainly a strong argument in favor of filtration.

Where meters are used to any extent the expense of repairs with clear water is considerably less than when the water is muddy. The year before we began filtering the water 40 per cent. of the number of meters in use were stopped from various causes, principally by grit and foreign matter, and last year only 11 per cent. of the total number in use were disabled, although about half of our meters are five years older.

There is no part of a water-works plant that is so largely and promptly remunerative as a filter plant, and it pays a larger interest upon its cost, due to increase in revenue and saving in other directions, than any other portion of the works.

PURCHASING AGENT FOR CHICAGO.

Among the many good things proposed by Mayor Harrison, of Chicago, is an ordinance creating the office of city purchasing agent. The mayor has a plan, and an ordinance embodying it, to consolidate the purchasing of supplies for all departments of the city government under one head, instead of leaving all as it now is, scattered through the departments.

Under the present system in vogue in the city hall the city has a purchasing agent for only the department of public works.

Each department has its own buyer, and there is no system whatever about it. One department may have its printing done in one establishment and the others may patronize another, and it is the same in all other matters. The police department, with its great quantities of feed and other things to be obtained; the fire department, with another line of necessaries; the health department, with still another, and the financial and law departments all work independently of all the others.

The ordinance now being prepared will create a supply department and the office of city purchasing agent. The salary to be paid will equal that of any other department head, \$6,000, and there will be a deputy to assist in the routine. Mayor Harrison says for this money a first-class buyer, such as are employed by the big wholesale houses or the department stores, can be secured for the city and the business be operated in an economical manner. That the measure will pass the council is believed to be a certainty.

WHAT JERSEY CITY WILL SPEND.

The board of finance of Jersey City, N. J., has made the appropriations for the fiscal year beginning December 1, 1897, as follows:

ber I, 1897, as follows:	
Board of Education	\$401,474.00
Board of Street and Water Commissioners	231,720.00
Board of Police Commissioners	416,281.35
Board of Fire Commissioners	218,350.00
Board of Aldermen	53,750.00
Board of Tax Commissioners	1,600.00
Commissioners of Appeals	3,700.00
Sinking Fund Commissioners	1,900.00
Commissioners of Assessments	200.00
Board of City Hall Commissioners	25,368.00
Board of Finance	960,873.67
Total	\$2,331,217.02
Less one-quarter of liquor license money unappro- priated by Legislature	62,500.00
	\$2,268,717.02
Less amount to be received from the State for	
schools	250,000.00
	\$2,018,717.02
Less amount to be received under an act "for the taxation of railroad and canal property," approved April 10, 1884; the same to be first applied to the payment of the city debt and interest	
falling due thereon	372,000.00
	\$1,646,717.02
Add one-ninth, in conformity with the provisions	

Amount fixed to be raised in Jersey City for all city purposes for taxation during the ensuing fiscal year.....\$1,832,463.35

It is estimated that the tax rate will be \$28.92 per thousand, an increase of \$1.52 over the current year.

COLUMBUS TAX LEVY.

The tax levy and budget for Columbus, Ohio, for the ensuing year has been finally fixed as follows:

General expense	Mills.	Amount Preduced. \$62,000
Fire department	2.28	141,360
Police	1.33	82,460
Sanitary	.25	15,500
City Hall	.06	3.720
Gas and light	1.14	70,680
Sewers and drainage	.085	5,270
Library	.15	9,300
Poor	.33	20,460
City park	.035	2,170
Goodale Park	.055	3,410
Franklin Park	.065	4,030
Minor parks	.005	310
Workhouse	.085	5,270
	6.87	\$425,940

The changes made in the levy from last year are as follows: Police fund, reduction of .09 mills, or \$5,765.10; sanitary, reduction of 13 mills, or \$8,107.53; city hall, reduction of .015, or \$939.77; sewers and drainage, reduction of .01, or \$632.38; library, reduction of .015, or

\$951.50; poor fund, increase of .305, or \$18,906.75; city park, reduction of .015, or \$936.70; Goodale Park, reduction of .015, or \$939.12; Franklin Park, reduction of .005, or \$319.12; workhouse, reduction of .01, or \$632.38.

FINANCIAL SHOWING OF DETROIT.

The financial condition of the city of Detroit, Mich., is shown as follows in the annual report of City Comptroller Blades, just issued:

ASSETS.	
Public buildings\$	2,202,330.00
Markets	293,000.00
House of Correction	245,000.00
Western yard and lot, board of public works	34,850.00
Old cemetery, Russell street	63,000.00
Hospital grounds, Grosse Pointe	22,000.00
Public library and books	531,000.00
Belle Isle bridge and approach	375,0000.00
Belle Isle Park	3,000,000.00
Other city parks	3,255,000.00
Pesthouse	8,000.00
Vacant lots	1,550.00
Board of education	2,618,057.00
Board of metropolitan police	296,242.44
Fire commission	1,528,477.73
Public lighting commission	729,222.73
Water commission	5,228,255.43
Total\$ LIABILITIES.	20,430,985.33

Value of property over liabilities......\$15,603,450.13

The assets for the preceding year were \$19,957,764.72, and the liabilities \$4,990,128.71.

AGAINST RESTRICTIVE SPECIFICATIONS.

H. A. Wise, city engineer of Kansas City, Mo., does not believe in making any specific brand of asphalt a standard to which all others must conform. In his annual report he says: "Repeated efforts have been made during the year to draft some sort of specifications that would permit different kinds of asphalt to come into free and full competition with each other for a place on our streets. Those endeavors, however, have proved futile for one reason or another. I am satisfied that such specifications whenever adopted must be built on broad and generous foundations, and all features of a restrictive or prohibitive nature eliminated. No specific brand of asphalt should be selected as a standard to which all others must conform, either in general characteristics, method of treatment or manner of laying. I see no reason why asphalts which have proved successful in other cities, whether mastic or rock, laid with or without a binder course, or manipulated and laid in different ways, should not be admitted upon equal terms at out lettings, and the lowest in price be selected; provided, of course, the bidder is a responsible and experienced person and can furnish the necessary security for the faithful performance of his contract, and the maintenance of his work for a designated period of time."

MUNICIPAL GARBAGE PLANT.

Milwaukee will probably own and operate a garbage reduction plant. After a great deal of wrangling, a special committee of the council, by a vote of 13 to 4, decided to recommend for passage an ordinance providing for the issue of \$140,000 of bonds for a garbage disposal plant. The principal argument for municipal ownership was made before the committee by City Engineer Benzenberg. Regarding the cost, Mr. Benzenberg said:

"The most reliable information I can give you on the cost of a garbage disposal plant is taken from the bids offered to the board of public works in December last. At that time the River Machine and Boiler Company offered to put up a 150-ton plant in Milwaukee for \$116,-396. This was complete with the exception of the site, and was the Holthaus system. As to the cost of operation, the company figured it at 57 cents a ton, or \$26,795 a vear. From figures we obtained in the same way regarding collection, I think it would cost about \$30,000 a year to collect the garbage; that is, 90 or 100 tons a day. I do not think, however, that it would be well for you to confine yourselves to any one system. I don't want to advise the council on the subject of systems, as it has abundant talent in that direction. But I think it would be well to draw up specifications which would require several systems to be combined. Then there will be competition."

CITY WATER VS. WELL WATER.

William R. Hill, chief engineer of the Syracuse water works, in his recent annual report, advances a strong argument against the use of well water. After stating that over one-third of the people in his city are using water from wells and cisterns, while there are city water mains in front of their premises, he says:

The water from wells might be considered as being taken from a subterranean lake which drains from a large To illustrate this I would call to your notice the effect of pumping from the gang wells at Onondaga Valley, which is located only one-half mile beyond the southern limits of the city. Pumping was commenced there on September 4, 1888, and continued two months. water in the wells was lowered 6 feet, while in a well located one-half mile to the north the water was lowered 3 feet, and in a well located one-half mile to the south the water was lowered 4 feet. When pumping was suspended the water commenced to rise in all of the wells until it reached its normal height. This conclusively proves that the water pumped from wells might be drawn from a large area and be subject to contamination from many sources

In defense of the use of cistern water, which is contaminated by the dust and filth that settle on roofs, and of the use of well water, some will say that they have used it for the last ten or twenty years and that they are still healthy. But there has been much illnesss and many are mourning the loss of their friends. Do the people realize that the population of the city is continually increasing, and that the sources of contamination from fecal pollution and disease germs are also increasing? Do they know that typhoid fever is caused by living germs called typhoid bacilli, and that a typhoid fever patient is a producer of these germs, which are almost sure to be carried to privy vaults, cesspools, sewer drains or garbage heaps, and that they finally find their way to the saturated stra-

tum of gravel which supplies the wells with water? These germs have great vitality, and moisture and filth are favorable conditions for their propagation. It has been estimated that a single germ is capable of producing more than 16,000,000 germs in twenty-four hours.

In addition to being contaminated by living germs, water is often badly polluted by poisonous gases, liquids and solids from putrid animal and vegetable matter, which, if they do not produce actual diseases, will reduce our power of resistance to attacks of disease.

Water is generally consumed as a raw food. About three-quarters of all other food is sterilized before it is used, so that there should always be the greatest precaution in selecting a water supply. Statistics show that the highest death rate from typhoid fever in our Eastern cities has been in Washington. There they have many wells in use, and scattered throughout the city there are over 14,000 privy vaults.

I earnestly concur with our health officer, Doctor Sears, in his annual report, in which he says: "I will recommend the continuation of the system of abolishing wells. The energetic work in this line has already decreased the typhoid fever rate and if the city was entirely supplied with Skaneateles water the disease ought to be almost eliminated. Every case which has been investigated proves that the primary cause of the disease has been the consumption of well water by the afflicted. Underground water has many polluted sources."

Underground water has many polluted sources."
Other diseases known to be conveyed by water are cholera, diarrhoea, dysentery, enteritis, and malaria.

GAS COMPANIES PAY FOR CITY HALL.

The two gas companies of Cleveland, Ohio, pay 6½ per cent. of their gross earnings into the city treasury as a fund for a new city hall. Since the price of gas was reduced from \$1 to 80 cents for 1,000 cubic feet, and the gas companies began to pay a percentage of their receipts into the city treasury, which was in 1893, these two companies have turned over the sum of \$251,376.48, which, with accrued interest, now amounts to \$260,352.62. The sums paid per year are as follows: In 1893, \$42,113; 1894, \$45,044.48; 1895, \$50,445.96; 1896, \$55.462.07; 1897, \$58,310.97. Deputy City Auditor Crosby estimated that by 1902, when the present agreement between the city and the gas companies expires, the fund will have reached the sum of \$627,000.

The agreement alluded to was to continue for ten years, then to be readjusted. It is expected that another compact, equally as profitable to the city, will be made in 1902 for another term of years. The new city hall by that time, no doubt, will be under course of construction, if not completed. It has been estimated that the structure, with a site, will cost in the neighborhood of \$2,000,000. This big sum will be paid entirely, Deputy Auditor Crosby says, from the payments by the gas companies.

BRINE FOR STREET SPRINKLING.

Street sprinkling with salt water has been given a trial in San Francisco; L. M. King, who superintended the experiment, says:

Salt water binds the dirt together between the pavingstones, so that when dry there is no loose dirt to be raised by the wind; it does not dry so quickly as fresh water, and it is claimed by those cities which use salt water that one load of salt water is equal to three of fresh water. The correctness of this claim is now being studied in the experiments made. The salt which is deposited on the street absorbs moisture from the air during the night, so that during the early morning the street is thoroughly moist and has the appearance of having been freshly sprinkled. This effectually prevents dust being raised by the wind or street sweepers before the regular sprinkling carts can get over the ground during the morning, and thus overcomes one of our greatest nuisances. It is more healthful than fresh water, for the reason that salt water will destroy many disease germs now contained in the dirt on our streets.

These advantages are particularly noticeable on Market street, between Jones and Fell, where this experiment was made. The north side and centre of the street between the tracks were sprinkled with salt water, while the south side of the street was sprinkled with fresh water. Along the north side and centre the dirt was compactly bound together, was always moist between the stones, so that there was never any dust raised there, and during the early morning that portion appeared as though freshly sprinkled.

The amount that San Francisco pays for fresh water for street sprinkling would in a few years be sufficient to pay for a salt water pumping plant. Furthermore, the damage to goods in stores from flying dust would equalize the outlay for a pumping plant.

PERSONAL.

—Henry Potthoff has been appointed city treasurer of Peoria, Ill., to succeed Alt. Gerdes, deceased.

—Dr. M. H. Cleary has been appointed city treasurer of Galena, Ill., to succeed Philip Koehler, resigned.

—Joseph King is the new superintendent of the police telegraph at St. Paul, Minn. He succeeds Joseph Mc-Cauley

—Sam J. Kenyon has been elected a member of the board of police and fire commissioners of Salt Lake City to succeed Louis Cohn, resigned.

—Mayor Flower, of New Orleans, has just returned from a European trip. He visited London and Paris and studied the municipal departments there.

—City Engineer Thomas R. Dunn and Councilman Robert W. Collier, of Petersburg, Va., recently visited several nearby cities to investigate the subject of street paving.

—Louis Cohn has resigned from the board of police and fire commissioners of Salt Lake City. He says the position is a thankless one and he must devote all his time to his business.

—M. C. Quinn has been appointed commissioner of special assessments, and George Ditewig commissioner of sewers, at Peoria, Ill. Both are new offices created by the last legislature.

—Eugene Holcomb, of the electric light firm of Mc-Caskey & Holcomb, Springfield, Ill., was a caller at the CITY GOVERNMENT office recently. He and Mrs. Holcomb spent a very pleasant vacation at Far Rockaway and other seaside resorts.

—Mayor Fiske, of Mt. Vernon, N. Y., has appointed Joseph A. B. Sterling a member of the fire commission to succeed A. W. Wallendar, resigned. At the same time Fire Commissioner John Lockhart was reappointed for another term of two years.

—Mark N. Hubbell, city clerk of Buffalo, is enjoying his vacation at a beautiful summer home on the lake shore, about 12 miles from the city. Most of the Buffalo councilmen and aldermen are also away from the city, both legislative bodies having adjourned for about a month.

—Arthur C. Hastings, the mayor of Niagara Falls, is in charge of one of the largest paper mills in the world. The tact and energy he displays in handling his large business interests and discharging his official duties are remarkable. Mayor Hastings finds only one thing impossible, and that is to muzzle the hack drivers at the Falls.

—Several of the city officials of Baltimore have returned from their summer vacations. They are: City Solicitor Thomas I. Elliott, who was at Ocean City; City Register Stone and President Henry F. New, of the School Board, who were in Atlantic City; Mr. A. W. Bostwick, commissioner of street cleaning, who spent two weeks in New York, Brooklyn, Long Branch, Asbury Park, West Point and other places.

PUBLIC LIGHTING.

—The council of East Liverpool, Ohio, has decided to light the city by electricity. Bids will be asked for at once.

—The borough of North Braddock, Pa., has made a ten-year contract with the Braddock Gas and Light Company to supply electric arc lamps for street lighting at \$70 per year.

—The mayor and council light committee of Atlanta, Ga., have been directed to investigate the proposition of municipal ownership of an electric lighting plant. It now costs the city about \$75,000 a year to light its streets.

—A large number of the business men of Houston, Tex., who believe that they are now paying exorbitant prices for electric light, have petitioned the council to submit to a vote of the people the proposition for a municipal electric plant.

The common council of Niagara Falls, N. Y., has decided to advertise at once for bids on a five-year street lighting contract, to date from November 1, 1898. The bids are to be for 300 arc lamps, of 2,000 c. p. each, the city reserving the right to increase or decrease this number of lamps at any time.

—Councilman Reagan, of Fall River, Mass., has had an order passed by the council to have the committee on street lights consider the advisability of municipal ownership of an electric light plant. The present contract with the Fall River Electric Light Company expires on October 2, The city is now paying 42½ cents per night, each, for 501 lamps. The street lighting appropriation for the current year is \$85,000.

—The city council of Indianapolis, Ind., has passed an ordinance requiring local gas companies to furnish gas at 75 cents per 1,000 feet. The present rate is \$1.25, and the new ordinance will undoubtedly be resisted in the courts. The action of the council was inspired by the fact that the gas company at Indianapolis pays 12 per cent. dividends on \$2,000,000 of stock and 6 per cent. on \$2,750,00 of bonds, notwithstanding the plant was purchased five years ago at a cost of about \$1,000,000. This company thus pays annually in dividends and interest the sum of \$405,000, besides operating expenses, and the people reached the conclusion that this profit ought to be reduced by giving them cheaper gas.

The injunction suit of J. H. Windsor to restrain the city of Des Moines, Ia., from entering into a contract with the McCaskey & Holcomb Company for the construction and operation of an electric lighting plant has been decided against the plaintiff. As noted in these columns before, the proposition of the McCaskey & Holcomb Company to build a plant at Des Moines and operate it under terms which would make it the property of the city at the expiration of six years, was accepted by the people at a special election by a vote of three to one. Mr. Windsor, as a taxpayer, sought to enjoin the city from making the contract. His injunction was dissolved because it was premature, and there may be subsequent litigation.

—The proposal of the Minneapolis General Electric Light Company for lighting the streets of Minneapolis, Minn., during the ensuing year, has been reported favorably by the council committee. The company's proposition shows a material reduction from the prices quoted in former years, and is based on the assumption that the city will use a greater number of lights than formerly. The proposition is to supply street lights on the all-night schedule at \$118 per year, and on the moonlight schedule at \$100 per year. The number of lights was increased from 700 to 800, of which 200 will be lit all night and 600 according to the moonlight schedule. The expense will exceed that of the present year by about \$75, but the city will gain 100 additional lights.

The St. Louis municipal assembly has passed a bill authorizing the board of public improvements to advertise for bids on street lighting. Under the provisions of the bill, the board will call for bids on four different prop-Two are for the lighting of the streets by conositions. tract, one of the propositions being for electric lighting and the other for illumination by the use of gas. proposition is also to be submitted for the building of an electric plant, and another for the erection of gas works. After the bids are in, the city will determine which of the propositions shall be accepted. If it is decided to accept a proposition that the contractor shall build a plant, the city will go into the lighting business on its own account by operating the plant so constructed and selling light to private consumers, as water is now sold from the city's waterworks. The lighting plant will be leased by the city for a term of years, under an arrangement which will vest the city with ownership at the termination of the lease.

FIRE DEPARTMENT NOTES.

—The Wilkesbarre, Pa., fire department has ordered its first chemical engine. It will be located at No. 2 engine house.

—The convention and tournament of the Pennsylvania State Firemen's Association will occur at Wilkesbarre, October 4—8.

—Harrisburg, Pa., councils have ordered two new steam fire engines, one of the La France and the other of the American make.

—The council of Lancaster, Pa., has passed an ordinance providing for an increase in the fire department. It is probable that another engine and another hose company will be added.

—The Kansas State Firemen's Tournament will be held at Topeka, September 27 and 28. The official programme has been issued by President A. P. Elder, of the State Firemen's Association.

—The reel racing team of the Hope Fire Engine Company, of Florence, S. C., made a clean sweep of all the contests they entered at the Interstate Firemen's Tournament at Fayetteville. Upon their return home the boys were presented with \$300 by the citizens.

—Capt. Michael T. Free, of the Rochester, N. Y., fire department, has invented a new nozzle which was recently given a successful test. The invention consists of a nozzle attached to the hose by a swivel joint which enables the fireman to turn the nozzle in any direction without moving the hose.

—Allentown, Pa., has recently adopted and passed an ordinance making it compulsory for every employee of the fire department paid by the city to wear while on duty the regulation uniform, and if any employee neglects to wear such uniform while on duty, as required, such neglect shall be sufficient cause for removal from office by the mayor.

—Chief Marjenhoff, of the Charleston, S. C., fire department, has been granted a leave of absence to attend the New Haven convention. Chief Marjenhoff is an ardent believer in conventions where representatives of various fire departments may gather and discuss the best ways of conducting a department and at the same time exchange other ideas.

—The Firemen's Relief Association of Kansas City, Mo., has planned to give a unique entertainment in the fall. An open block near the business part of the city will be enclosed by a high canvas wall like that used in a circus. Within the enclosure tiers of seats will be placed, and the entertainment will be given in the central arena. Chief Hale says that the show will probably represent a night scene in Kansas City. The mail wagon would dash by on its way to the depot, there would be a drunken row, a pickpocket escapade, bicycle riders, a boxing match and many other novelties, ending with a run of the fire apparatus.

-Next to its breweries, perhaps, Milwaukee is noted for its pipe lines, which run to and not from the breweries, and are used to carry water for the suppression of fires. They are the invention of James Foley, the chief of the Milwaukee fire department, and by means of them he is now able to cover the central part of the city with the fire boats in a manner that he could not do with double the number of engines which he has at his command. By means of the pipe lines the zone of action of the fireboats has been increased from 100 to 200 per cent., with comparatively little expense. These lines extend from the rivers on both sides, at various points, from 1,000 to over 3,000 feet. Chief Foley says that a fireboat at the end of a pipe line is worth from three to six engines, according to the length of the line. Therefore, by the extension of the lines at a comparatively small cost, the city has been saved the expense of several engines, to say nothing of the engine houses and the keeping up of companies.

The third annual convention and tournament of the Tri-County Firemen's Association, held at Whitehall, N. Y., August 4 and 5, was a brilliant success in every particular. The business meeting was held Wednesday, Geo. F. Ashton, of Fort Edward, being elected president of the association for the coming year, and Schuylerville being selected as the place for the next convention, which will be held about July 4, 1898. An immense crowd was in the town Thursday to enjoy the festivities; the parade in the morning embracing seven bands of music, 1,500 firemen, eight hand engines and two steam-General interest centered in the engine contest, which was won by the Schuylers, of Schuylerville, who threw a stream 178 feet 11 inches, prize \$300; in the prize drill, won by Durkee Hose Company, with 79 1-3 per cent.; and in the hose race, which was won by the Unions, of Sandy Hill, in 54 seconds, prize \$125. A banquet in the evening fittingly wound up a very enjoyable affair.

WATER DEPARTMENT NOTES.

—The waterworks plant at Westerly, R. I., has been sold to the town by the private company. The deal was consummated after a legal and political battle of five years' duration.

—At a special election recently held at Mobile, Ala., the people voted four to one in favor of authorizing the council to build or acquire a system of waterworks to cost not exceeding \$500,000, and to construct a sewerage system to cost not exceeding \$250,000.

-A statement of the financial condition of the waterworks department of Kansas City, Mo., just sent to Eastern bond buyers, shows that the sinking fund now amounts to \$119,410. Of this amount \$62,000 is invested in Kansas City school bonds and \$25,000 in Jackson County school bonds, the remainder being in cash, which draws interest on deposit. Since the city acquired the works in September, 1895, \$116,000 has been invested in improvements, and the annual interest of \$139,500 has been paid promptly. All of this money was derived from the earnings of the department.

-The municipality has a monopoly in the control of the water service, and it is a form of paternalism in our local government which is not offensive in the slightest degree, but is for the best interests of the people, as is true in the case of all natural monopolies under a wise and enlightened system of local government. The meters are as necessary a part of the water service as are the mains, and should be owned by the city, if it is the wish of councilmen to put the assessments upon a uniform and equitable basis. The system now used is neither equitable nor uniform, but is as crude, unequal and unjust as ingenuity itself could devise. If we are correctly informed, the rate is imposed with reference not to the quantity of water used, nor to the number of persons using it, but to the number of openings in the house, such as washstands, bath tubs, water closets, etc. There is but one remedy for this flagrant violation of the very fundamental principle of justice in taxation, and that is the meter.—Petersburg, Va., Index-Appeal.

-The report of the water board of Syracuse, N. Y., for the year ended June 30, 1897, is at hand. The gross receipts of the department for the year were \$254,975.86, which is an increase of \$55,470.33 over the preceding year, despite the fact that the rates to consumers were re-The receipts from meter accounts were \$120,-205.52; from schedule accounts, \$51,498.41: frontage tax, \$18,725.46; water for municipal use, \$60,000. The total disbursements for the year amounted to \$256,018.89. against \$219,526.10 for the previous year. The principal disbursements were for interest on bonds, \$131,083.33; general expense, \$38,054.02; construction, \$35,529.95; material and supplies used in construction, renewals, and repairs, \$26,762.19; maintenance repairs, \$10,826.56. The total number of water services on July 1 was 12,443, of which 9,944 were in use, 470 had water off, and 2,029 extended only to curb. The number of meter accounts was 4,704, and of schedule accounts 5,999. There are 134.6 miles of mains, with 2,168 hydrants. The average daily consumption of water for the year was 7,755,000 gallons.

POLICE DEPARTMENT NOTES.

—Archie Johnson, the well-known horseman, has been appointed Chief of Police of Meadville, Pa.

—A bureau of Bertillon measurement and identification has been established by the police department of Grand Rapids, Mich. The bureau will be in charge of Police Clerk Fred. W. Webber, who recently visited Cincinnati for the purpose of studying the Bertillon system as followed there.

—William F. Ivers, chief of police of Jacksonville, Fla., has been in harness only about a month now, but during this time he has shown a determination to enforce the laws of the city. He has done this quietly and unostentatiously, but, nevertheless, his presence has been felt, and he is determined that the ordinances of Jacksonville shall be carried out.

—T. N. Vallins has been ousted from his position of Chief of Police of Kansas City, Mo., by the Supreme Court, on the ground that he was not a legal citizen of the State at the time of his appointment. Inspector John Haynes is now in charge of the force, and it is the intention of the Police Board to reappoint Mr. Vallins as soon as he qualifies as a citizen, which will be early in the spring.

—Col. Frederick D. Grant has resigned from the Board of Police Commissioners of New York City, because he would not assent to the practice of having policemen lie and otherwise degrade themselves to secure evidence against disorderly houses. At the time he sent in his resignation Colonel Grant said: "I will not recede one step by acquiescing in the methods of obtaining evidence against disorderly houses which the majority of the board favor and have decided upon. I believe firmly that the methods must eventually make sneaks and liars of men who, to be proper guardians of the life and property of our citizens, should be trained to do only what is honorable and upright. I will not approve bills for services of policemen when those bills tell plainly of degradation and debasement and give such a disgusting array of details as to prove that the existing system should be made impossible." Colonel Grant's position will be better under-



Contractors' Drainage Sewerage Pumps,

Handling Dirty, Gritty and Sandy Liquids without Wear, Oil or Care Pumping Outfits for Contractors, Mining, Irrigating, Railroad, Quarry, Drainage and Manufacturing pur poses. Second-hand Engines, Boilers, Pumps and other Machinery always on hand. Exhanging.

MASLINS, 165-167 First St. Jersey City, N. J.

DIXON'S SILICA GRAPHITE PAINT

FOR TIN OR SHINGLE ROOFS AND IRON WORK. Tin roofs well painted have not re-IT IS ABSOLUTELY WITHOUT AN EQUAL. quired repainting for 10 to 15 years.

If you need any paint it will pay you to send for circular.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.



New York, August, 1897.

It has come to our notice that reports are being industriously circulated to the effect that THE ALCATRAZ COMPANY has sold out its interests to the Trinidad-Bermudez combine and that the production and use of Alcatraz Asphalt is controlled by such combine. Such reports have been circulated more particularly in Buffalo, Cleveland, Erie, Detroit, Saginaw and Hoboken, cities in which Alcatraz Asphalt has come into direct competition, at the recent lettings, with the asphalt of the Trinidad-Bermudez monopoly.

These reports have been circulated evidently with malicious intent, to deceive the municipal officers and taxpayers of cities throughout the United States by leading them to believe that GENUINE COMPETITION could not be obtained from the bids of those using ALCATRAZ ASPHALT.

We declare all such reports and rumors to be absolutely and entirely false.

THE ALCATRAZ COMPANY.

WILLARD T. BARTON, General Eastern Manager.

stood when it is stated that policemen's expense accounts in New York contain such items as "wine, \$25," and "women, \$20."

TRADE NOTES.

—Reading, Pa., has appropriated \$10,000 for the erection of a garbage plant on ground owned by the city.

—The town of Union, N. J., will soon have a new Gleason & Bailey hose wagon.

—New York City has placed an order with the Gleason & Bailey Manufacturing Company for thirty more steel horse collars.

—New Rochelle, N. Y., has placed an order with the Gleason & Bailey Manufacturing Company for two modern hose wagons.

—The director of public improvements of Columbus, Ohio, will make an estimate of the cost of erecting a municipal electric light plant, by order of the council.

—Gleason & Bailey announce that they are still making the genuine Empire life-saving or jumping nets. New York City recently placed an order for ten of these nets.

—The Boston Asphalt Company has secured the contract for paving Court square, Springfield, Mass., with Sicilian asphalt. The amount of the contract is \$10,000.

—The Utica Paving Company were awarded the contract for paving Garden street, Hoboken, N. J., with asphalt. The New Jersey Mexican Asphalt Company got the Hudson street contract.

—The United Gas Improvement Company, of Philadelphia, are erecting at Atlanta, Ga., a water tower and tank. The tank has a capacity of 10,000 gallons, and is supported on a tower 60 feet high. They have let the contract for furnishing and erecting the tank and tower to the Berlin Iron Bridge Company, of East Berlin, Conn.

—The well-known firm of James Leffel & Co., of Springfield, Ohio, have issued a neat, new pamphlet "D," replete with numerous illustrations and descriptions of the throttling and automatic engines, with portable and stationary boilers, which they are building in a variety of sizes and styles. A copy is sent free to parties interested, on application to the company.

—The board of public safety of Indianapolis, Ind., has closed the contract with the Gamewell Company for a police telegraph system. The price stipulated is \$35,700. The contract calls for three four-circuit cabinets, with all receiving and registering apparatus and time stamps, 100 street boxes, equipped with automatic cut-out ma-

chinery, separate talking and signaling circuits. The company is to use superior copper wire cables, protected with cotton. All the specifications are written out in great detail. The company guarantees the plant for a period of five years, and agrees to give bond in the sum of \$20,000 that every detail will be carried out. The contract calls for the best material and most improved machinery known in the construction of the system. The aerial wire portion is fixed at 180 miles, but if more is required it is to be at the expense of the company, and if less the company agrees to make a reduction according to the amount.

SEWER THROUGH SOLID ROCK.

A tunnel 350 feet long has been dug through the solid rock of a hill at Twenty-fifth and McGee streets, Kansas City, Mo., and workmen are building a 30-inch brick sewer through it. The sewer will drain districts 54 and 55, which are bounded by Twenty-third street and Twenty-seventh street, Grand avenue and Charlotte street. The eastern part of this district along Holmes street is well built up, and five large brick houses are building on the west side of Holmes street, between Twenty-fifth and Twenty-sixth streets. Other building improvements in the district are planned, and all this made the drainage of the district a necessity.

The nearest large sewer to this territory is the one which runs beneath the centre of Grand avenue and flowed into O. K. creek, just west of the bridge, near the Milwaukee depot. Between the district and this main sewer is a high hill, consisting mostly of shale rock, and on each side of the hill are ravines. The contract to build the new sewer was let to the R. J. Boyd Paving and Construction Company, and work upon it began over a month ago. The eastern end of the sewer begins beneath the centre of Locust street. From that point to the eastern mouth of the tunnel at Oak street is a ravine, and a solid wall of masonry 12 feet high was laid, and on top of this wall the sewer was built.

Then the tunnelling through the hill began. The tunnel is 8 feet high and 8 feet wide. Workmen began at opposite sides of the hill and dug toward each other. Two tons of dynamite were used in blasting the rock. The two gangs of workmen met in the heart of the hill a week ago yesterday, and then the work of laying the sewer pipe began. Between the western opening of the tunnel and Grand avenue was another ravine, and a viaduct of masonry 17 feet high was built there to carry the sewer.



"Contracting and Purchasing Directory."

AIR LIFTS.

Geo. J. Kennedy, 1801 Gratz St., Philadelphia, Pa.

ALARM SYSTEMS, FIRE AND PO-

Gamewell Fire Alarm Telgraph Co., 19 Barclay St., N. Y. Municipal Signal Co., 28 State St.,

Boston. Partrick & Carter Co., 125 South 2d St.,

Philadelphia. . S. Fire and Police Telegraph Co., 246 U. S. Fire and Ponce. Washington St., Boston.

ASPHALT.

Alcatraz Co., San Francisco and N. Y.

AIR COMPRESSORS. Clayton Air Compressor Works, 23 Cortlandt St., New York.

ASPHALT MIXERS. Erie Machine Works, 13th and Peach Sts., Erie, Pa.

BAG CARRIERS.

Thornton H. Motley & Co., 43 John St., N. Y.

BATTERIES.

Gordon-Burnham Battery Co., 82 West

Broadway, N. Y.
S. White Dental Mfg. Co., Phila-S. delphia, Pa.

BOILERS. Wm. B. Pollock & Co., Brier Hill, Ohio. BROOMS.

Bentley Broom Works, 123-131 Norwood Av., Buffalo, N. Y.
Escoba Mfg. and Supply Co., 147-149 Cedar St., N. Y.

CEMENT.

Union Akron Cement Co, 141 Erie St., Buffalo, N. Y.

CIRCUIT BREAKERS. Automatic Circuit Breaker Co., Newaygo, Mich.

CIVIL AND CONSULTING ENGI-NEERS.

Chas. C. Brown, Bloomington, Ill.
G. L. Christian, Yonkers, N. Y.
Central Engineering Co., Lemcke
Building, Indianapolis, Ind.
Crellin & Lovell, Equitable Building,
Doe Moines Lovell, Equitable Building,

Des Moines, Ia.
A. Dunham, 150 Nassau St., N. Y.

J. T. Fanning, 330 Hennepin Av., Minneapolis, Minn.

Charles A. Hague, 39 Cortlandt St., New York.

C. O. Mailloux, 150 Nassau St., N. Y. Pierce & Richardson, 315 Dearborn St.,

Chicago.
David C. Sanford, 87 Church St., New
Haven, Conn.

Haven, Conn.
B. Schreiner, Des Moines, Ia.
Edmund B. Weston, 86 Weybosset St.,
Providence, R. I.
Wise & Watson, Passaic, N. J.

CONTRACTORS.
R. J. Boyd Paving and Contracting Co.,
Kansas City, Mo.

CROSS-ARMS, PINS AND BRACKI Central Mfg. Co., Chattanooga, Tenn. DISINFECTING APPARATUS.

Sanitary Construction Co., 56-58 Pine St., New York. W. F. Morse, 56-58 Pine St., New York.

ELECTRICAL CONTRACTORS.

McCaskey & Holcomb Co., Springfield,

ELECTRIC SUPPLIES.

Partrick & Carter Co., 125 S. Second St., Philadelphia.
Gordon-Burnham Battery Co., 82 W.
Broadway, New York.

ENGRAVERS.

Photo-Engraving Co., 67 Park Place, New York.

FIRE APPARATUS.

Gleason & Bailey Mfg. Co., 181-189 Mercer St., New York.

FIRE BELLS.

Buckeye Bell Foundry, Cincinnati, O. FIRE HOSE.

Fabric Fire Hose Co., 68 Murray St., New York.

Mineralized Rubber Co., 18 Cliff St., New York.

ww Jersey Car Spring and Rubber Co., Jersey City, N. J.

FIREMEN'S HATS.

G. A. Goebel, 199-201 Madison St., Chicago, Ill.

GARBAGE FURNACES.

W. F. Morse, 56-58 Pine St., New York.

GENERAL CONTRACTORS.

John H. Esson, 1008 Cham. of Comm., Chicago.

HOSE JACKETS.

Cooper Hose Jacket Co., Minneapolis, Minn.

INSULATED WIRES AND CABLES. Bishop Gutta Percha Co., 420-426 E. 25th St., New York. National Conduit and Cable Co., Times

Bldg., New York. Okonite Co., 253 Broadway, New York.

NOZZLES. A. W. Dolfini & Co., 140 Nassau St.,

New York. Eastman & Co., East Concord, N. H.

New Jersey Car Spring and Rubber Co., Jersey City, N. J. New York Coupling and Supply Co., 59

Ann St., New York. PAINTS, GRAPHITE.

Jos. Dixon Crucible Co., Jersey City, N. J.

PAVING BRICK.

Clearfield Clay Working Co., Clearfield, Pa.

Mack Manufacturing Co., Bissell Block, Pittsburg, Pa.
Purington Paving Brick Co., Galesburg,

PIPE, SEWER AND CULVERT. H. Stevens' Sons Co., Macon, Ga.

PIPE, WATER AND GAS. Charles Millar & Son, Utica, N. Y.

CONTRACTORS', DRAIN-AGE AND SEWERAGE.

Maslins, 165-197 First St., Jersey City.

ROAD MACHINES.

Austin & Western Co., Ltd., Chicago. St. Johnsville Agricultural Works, St. Johnsville, N. Y.

SAFES AND VAULTS.

Mosler Safe Co., Broadway and Duane
St., New York. Remington & Sherman Co., 23 Park Place, New York.

SEWER INLETS.

Shunk Plow Co., Bucyrus, O.

SMOKE AND VAPOR CONDENSERS. United Smoke and Vapor Condensing Co., Bourse Bldg., Philadelphia

SMOKE PROTECTORS.

Vajen-Bader Co., Indianapolis, Ind.

SPRINKLING CARS.

American Car Sprinkler Co., Worcester, Mass.

STAND PIPES.

Wm. B. Pollock & Co., Brier Hill, Ohio.

STEAM ROLLERS.
Erie Machine Works, 13th and Peach Sts., Erie, Pa.

STEAM SHOVELS, DREDGES, Etc. Vulcan Iron Works, Toledo, Ohio.

STEREOPTICONS.
J. B. Colt & Co., 120 Nassau St., N. Y.

STONE BROKERS.
Geo. W. Bollenbacher, Bloomington Ind.

STREET-CLEANING APPARATUS.
Thornton H. Motley & Co., 43 John St.,
New York.
Austin & Western Co., Ltd., Chicago.
Chas. Hvass, 509-511 E. 18th St., N. Y.

STREET SPRINKLERS. Austin & Western Co., Ltd., Chicago.

SUBWAY SYSTEMS.

National Conduit and Cable Co., Times Bldg , New York.

YPEWRITERS.
Wyckoff, Seamans & Benedict, 327
Broadway, New York.

VENTILATORS.

Pancoast Ventilator Co., Bourse Building, Philadelphia.

WATER FILTERS.

Cumberland Mfg. Co., 220 Devonshire St., Boston.
O. H. Jewell Co., 73-75 Jackson St., Chicago.
Morison-Jewell Filtration Co., 26 Cortlandt St., New York.

ATER PIPES.

William B. Pollock & Co., Brier Hill, Ohio. WATER METERS.

Standard Water Meter Co., 23 Vandewater St., New York.
WATER MOTORS.

Standard Water Meter Co., 23 Vandewater St., New York.

WIRE WORK.

Dow Wire Works Co., Louisville, Ky

G. L. REED, Pres. G. S. ETTLA, Sec'y and Treas. E. B. REED, Superintendent.

Clearfield Clay Working Co., CLEARFIELD, PA.,

MANUFACTURERS OF

ROADWAY MATERIAL.

Vitrified Annealed Street Pavers of Every D BUILDING BRICK of every kind-Red, Buff, Old Gold, Pompeian, White, Etc. FIRE BRICK for all uses.

SHALE AND CLAY PRODUCTS GENERALLY, Also STONE CURBING cut to order.

MACK MANUFACTURING CO.,

THE STANDARD MODERN Paving Bricks - Blocks

Of High Grade for Cities and Towns.

General Offices, Bissell Block, PITTSBURG, PA.

WORKS: Rocky Side, Union, Eagle, Ætna, Clifton, Crescent, Sligo, located at New Cumberland W. Va. We invite correspondence from those desiring Vitrified Paving Material of acknowledged superiority in respect to durability, uniformity and beauty.

Colin R. Wise, City Surveyor of Passaic, N. J.

ROBERT M. WATSON, Borough Engineer of Rutherford, N. I.

WISE & WATSON, Civil and Consulting Engineers,

Passaic National Bank Building, PASSAIC, N. I.

LANDRETH, OLIN H.,

SCHENECTADY, N. Y. M. Am. Soc. C. E.

M. Am. Soc. M. E.

CONSULTING ENGINEER.

Water Works, Water Power, Drainage. Sew age, Reclamation, Highways and Pavements. Expert Examinations, Tests and Reports.

W. F. MORSE,

Engineer and Contractor for

Garbage Cremating Furnaces, Disinfecting Machinery, 56 and 58 PINE STREET, N. Y.

CHARLES CARROLL BROWN,

M. AM. S. C. E.,

Consulting Engineer,

BLOOMINGTON, ILL.

G. L. CHRISTIAN.

ASSOC. M. AM. SOC. C. E.,

CIVIL ENGINEER,

WARBURTON BLDG., YONKERS, N. Y.

Water Supply, Sewerage, Topographical Surveys, Drainage, Grading and the Laving Out of Towns. Surveys, Plans. Specifications, Etc Work of Construction Superintended. Correspondence invited.



Such is the evidence adduced from pracical experience in favor of our Jacket

CAN YOU AFFORD TO BE WITHOUT IT?

OOPER HOSE JACKET CO.

MINNEAPOLIS, MINN

THE ROBERT J. BOYD PAYING AND CONSTRUCTION CO.,

315 American Bank Building, KANSAS CITY, MO.,

The construction of Water Works Plants, Railways, Sewers and Streets given special attention.

C.O.MAILLOUX,

CONSULTING ENGINEER,

150 Nassau Street. New York.

Municipal Electric Plants. Refers to No. Attleboro, Mass; Hamilton, N. J.; Madison, N. J.

PIERCE & RICHARDSON,

Consulting and Designing Engineers. 1405-1412 Manhattan, CHICAGO.

Departments of Engineering-Mechanical, Electrical, Heating, Ventilating, Sanitary. A SPECIALTY MADE OF TESTS AND REPORTS.

F. A. DUNHAM. CIVIL ENGINEER.

Special attention given to the design and construction of sewerage systems. Consulting and Constructing Engineer for paving of every description and general municipal improvements.

150 NASSAU STREET, 109 PARK AVENUE,

NEW YORK. PAINFIELD, N. J. Telephone, 87 F, Plainfield.

DAVID C. SANFORD. Engineer,

87 Church Street,

NEW HAVEN, CONN.

EDMUND B. WESTON,

Consulting and Civil Engineer, M. Am. Soc. C. E., M. Inst. C. E., 86 Weybosset Street.

Providence, R. I.

Asst. City Engineer in Charge of the Providence (R. I.) Water Department from 1878 to 1807. Specialties: Water Supply, "Natural Filtration," "Mechanical Filtration," Fire Protection, Swerage, Municipal Work, Expert Testing of Pumping Engines, etc.

B. SCHREINER,

Civil Engineer and Architect,

PUBLIC AND PRIVATE BUILDINGS, IRON STRUCTURES. MUNICIPAL ENGINEERING.

Des Moines, Iowa.

CHARLES ARTHUR HAGUE, Consulting and Supervising

ENGINEER,

WATER WORKS A SPECIALTY. 39 CORTLANDT STREET, New York.

J. T. FANNING, CONSULTING ENGINEER.

M. AM, SOC, C. E.,

330 HENNEPIN AVENUE, MINNEAPOLIS, MINN.

Plans for Public Water Supplies, Steam and Hydraulic Powers and Electric Power Transmissions.

CRELLIN & LOVELL, CIVIL AND CONSULTING ENGINEERS. 808 EQUITABLE BUILDING, Des Moines, Ia.

Designs, superintendence and construction of iron and steel structures, water works and sewerage

S. F. PECKHAM,

Analytical Chemist.

Expert determinations of every description relating to Petroleum or Asphalt a specialty.

41 N. Main St.,

ANN ARBOR, MICH.

Photo Engraving Co.,

67 Park Place, & New York.

Half-Tone. & &

Line Engraving.

Color Plates. 🧀

h. Stevens' Sons Co., MACON, GA.

SEWER and R. R. CULVERT PIPE

Fire Brick, Milled Clay Flue Pipe and Chim-ney Tops, Urns, etc. Correspondence solicited Awarded Gold Medal Cotton States and Inter-national Exposition, 1895.

SIMPSON BROS. CO.

CONTRACTORS

COMBINED CURB AND GUTTER

And Portland Cement Sidewalks.

ESTIMATES FURNISHED ON ALL CLASSES OF CEMENT CONSTRUCTION.

Room 704 Chamber of Commerce, Chicago.

JOHN H. ESSON.

GENERAL CONTRACTOR.

100S CHAMBER OF COMMERCE, CHICAGO. TELEPHONE, MAIN 45

Builder of Sewers, Pavements, Macadam Streets, Water Works, Bridge Masonry, and all kinds of Curbing and Cement Work.

TO PAVING CONTRACTORS.

GEO. W. BOLLENBACHER.

Stone Broker,

BLOOMINGTON, INDIANA.

Street Curbing and Flagging a specialty. Correspondence solicited.

BOILER FRONTS, DREDGES AND EXCAVATORS.

Correspondence Solicited.

VULCAN IRON WORKS CO., Toledo, Ohio,

Steel Riveted

Water Pipe, Excavating Shafts.

Tank Cars.

P. O. Address: BRIER HILL, O.

Works at YOUNGSTOWN, O.

Pressure Tanks, Stand Pipes, Boilers, Etc.

Structural Work.

HIGH GRADE

RUBBER GOODS

Our Name and Brand a guarantee of quality.

FIRE HOSE,

STEAM HOSE, WATER HOSE, BELTING, PACKING, MATS, MATTING, AND STAIR TREADS, TUBING, GASKETS, SPRINGS, VALVES, Etc.

Send for Catalogue, Samples and Prices.

N. J. CAR SPRING & RUBBER CO.,

MAIN OFFICE

JERSEY CITY, N. J.

McCaskey & Holcomb Company,

CONTRACTORS,

PRINGEIELD. II

... SPRINGFIELD, ILL

415 Commercial Building, ST. LOUIS, MO.

We make a specialty of constructing Municipal Electric Lighting Plants.

Send for Estimates and Valuable Information.

Kennedy Patent Air Lift.

Can be attached to any make of compressor and system of piping you have in your wells, and will pump all the water without any waste of air.

Air lifting plants, wells and water works examined.

New plants installed.

GEORGE J. KENNEDY.

Hydraulic Engineer and Contractor,

1801 Gratz Street,

PHILADELPHIA, PA.

Special Air Compressors for all R. R.

Car Shop Uses.

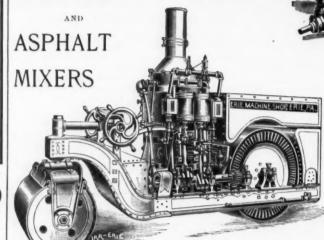


CLAYTON AIR LIFT PUMPS.

ERIE MACHINE SHOPS

P. W. DIETLY, Prop.

Steam Rollers



Corner Thirteenth and Peach Streets.

ERIE, PA.

The principal Asphalt Paving Companies in the country are using these machines, which are pronounced to be the

Best in the Market.

Worthington Water Meters

...Correspondence Solicited.

Henry R. Worthington,

NEW YORK.

BOSTON. DETROIT. INDIANAPOLIS, CLEVELAND. St. LOUIS,

CHICAGO. PHILADELPHIA. ATLANTA.

Every Point

A Good Point

in the NEW MODELS of the



GOOD IN EVERY PART.

GOOD FOR EVERY PURPOSE.

DOES GOOD WORK, AND

DOES IT A GOOD LONG TIME.

Wyckoff, Seamans & Benedict

327 Broadway, New York

Hose—Fire, Precautionary, Garden or other—is better in Mineralized Rubber than in Vulcanized. Samples and full information free. Agents Wanted. Mineralized Rubber Co., 18 Cliff Street, New York.





REMINGTON & SHERMAN CO..

SAFES AND VAULTS 23 PARK PLACE,

NEW YORK.

UNION AKRON CRMENT CO.,

Office, 141 ERIESTREET, BUFFALO, N. Y.



The Vajen-Bader Patent SMOKE PROTECTOR.

For Fire Departments, Brew-eries, Mines, Gas and Chemical Works.

Over 100 Departments supplied and \$3.000,000.00 saved the first year. Send for catalogue.

VAJEN-BADER CO., Indianapolis, Ind.

Firemen's Caps.

Uniform caps made on wire cloth frame will keep shape, are light in weight, and water does not affect them. Adopted as the uniform cap by the Chicago fire department. For band or society caps the wire cloth frames are a great in provement. Can be made in any shape or style. Samples and price list sent on application.

G. A. GOEBEL,

199-201 Madison St., Chicago.

BUY THE PATENT

FOR THE HOUSE, FACTORY, STREET, OR STABLE.

THE PUSH BROOM

With Patent Scraper Hoe.

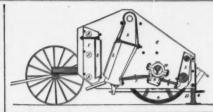
For Sale by All Dealers, or

Escoba Mfg. & Supply Company,



147-149 Cedar Street, New York.

Sole Owners and Manufacturers.



STONE CRUSHERS AND ENGINES

The "Williams" Patent Steel Stone Crusher, built portable for Township, Village or Contractors, or for Quarry Use.

ALSO PORTABLE ENGINES, SCREENS
AND ELEVATORS. Address

St. Johnsville Agricultural Works, ST. JOHNSVILLE, N. Y.

CHIEFS OF FIRE DEPARTMENTS

NEW YORK COUPLING AND SUPPLY CO., 59 ANN STREET, CITY.

BENTLEY BROOM WORKS BRUSH COMPANY BUFFALO WIRE

C. D. ZIMMERMAN PROPRIETOR

123 TO 131 NORWOOD AVE., BUFFALO, N. Y.

All kinds of Cylinder Street Brooms to fit any machine, new or refilled. WE pay treight both ways, which practically brings the factory right to your door.

PUSH BROOMS OF ALL DESCRIPTIONS. FOR SMOOTH PAVEMENTS. LIGHT ONE-HORSE SWEEPERS, 4 FEET WIDE, FOR WALKS, SKATING RINKS, DOCKS, ETC. NEW AND SECOND-HAND SPRINKLING WAGONS.

CORRESPONDENCE SOLICITED.

Central Manufacturing Co.,

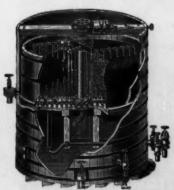
QHATTANOOGA, MANUFACTURERS AND DEALERS IN



Large Stocks on Hand.

SEND US YOUR ORDER.

Will take pleasure in quoting delivered prices, F. O. B. cars, your city, in any quantity. WRITE US.



Combined with Subsiding Basins.

GRAVITY and --PRESSURE FILTERS.

> O. H. Jewell Filter Co. 73-75 W. Jackson Street, Chicago

The Morison-Jewell Filtration Co. 26 Cortlandt St., New York; 26 8 15th St., Phitadelphia

NON-ARCING AUTOMATIC CIRCUIT BREAKERS AUTOMATIC CIRCUIT BREAKER COMPANY, NEWAYGO, MICH., U. S. A

THE NIAGARA SEWER INLET.



Straight.

Address.

Made for all size Pipe up to 22 inches, and any radius. Price reduced.

THE SHUNK PLOW CO., Bucyrus, Ohio.

The Sanitary Construction Company, 56-58 Pine Street, New York City.

Engineers and Contractors.

Design and erect complete plants for Municipal Disinfecting Stations. Steam and Formaldehyde Gas Disinfecting Apparatus.

Garbage Cremating Furnaces and the Household Garbage Carbonizer.

LILLEY ...

for Police and Firemen.

He who makes the best goods gets the most business.

The largest manufacturer of uniforms in America is

THE A C. LILLEY & CO., Columbus, Ohio. Catalogues and full information free.

Second Annual Convention

INTERNATIONAL ASSOCIATION OF FIRE AND POLICE TELEGRAPH SUPERINTENDENTS

NASHVILLE, TENN., September 15, 1897. 34 34

2 ft. radius.



PROPOSALS

The Collection, Removal and Final Disposition of Garbage, Ashes, Etc., for a Period of Five Years.

OFFICE OF THE
DEPARTMENT OF PUBLIC WORKS,
CHICAGO, Aug. 3d, 1897.

DEPARTMENT OF PUBLIC WORKS, CHICAGO, Aug. 3d, 1897.

Sealed proposals will be received by the city of Chicago, until 11 a. m. Friday, September 3d, 1857, for furnishing all wagons, carts, teams, machinery, tools, implements and labor of every description whatsoever necessary to collect and remove, and to collect and remove all garbage, ashes and rubbish from the streets, alleys and public places of said city and to make such final disposition of the same as shall be necessary to comply with the specifications on file in the office of the Department of Public Works, for a period of five years commencing January 1st, 1898.

Bidders may submit proposals for the work to be done in each district separately, or any number or all of said districts.

Proposals must be made out upon blanks furnished at said office and be addressed to said department, indorsed "Proposals for Collection, Removal and Final Disposition of Garbage, Ashes, Etc.," and be accompanied with ten thousand (\$10,000) dollars in money or a certified check for the same amount on some responsible bank doing business in the city of Chicago, and made payable to the order of the commissioner of public works.

The commissioner of public works reserves the right to reject any or all bids, and to accept bids as applied to each district separately, or any number of districts, or to let the whole in bulk, as he shall elect.

No proposal will be considered unless the party offering it shall furnish evidence satisfactory to the commissioner of public works of his abulity, and that he has the necessary facilities, together with sufficient pecuniary resources, to fulfill the conditions of the contract and specifications, provided such contract should be awarded to him.

Companies or firms bidding must give the individual names as well as the name of the firm, with their address.

Bids will not be received after the hour above named.

Commissioner of Public Works.

THE CLIPPING BUREAU

"Is a Handy Institution."

·····

You Can Keep Up to Date by ordering from us clippings of everything printed on the subject you are interested in.

We read and clip the current issues of all American and the leading Foreign Dailies, Weeklies, Magazines, Trade Papers, etc.

Material for Speeches, Lectures, Novels, etc.
Daily reports of new industries or stores, etc., seeking location and Factories who desire a change of location.

Rates \$1.00 per month and upwards.
Send for our proposition.

The Chicago Press Clipping Bureau,

56 Fifth Avenue, CHICAGO.

Che Press & & Clipping Bureau.

ROBERT & LINN LUCE, Proprietors.

The Largest Clipping Bureau in the World.

OFFICES: 68 Devonshire St., Boston.
13 Chambers St., New York.
Pike Building, Cincinnati.
Cooper Building, Denver.

*ADDRESS THE NEAREST OFFICE.

...Vitrified Shale... PAVING BRICK.

Galesburg, Ill., is acknowledged as the centre for the manufacture of these brick, and the

PURINGTON.....

Paving Brick Co.

is conceded to have the largest and best equipped plant in the United States for this purpose. For quality of product, promptness in delivery and attention to details, it aims to equal if not excel all its competitors.

Main Office of GALESBURG, ILL.

Chicago Office, 322 Chamber of Commerce Bldg.

MANAGE

The PARTZ

Pateired | Aug 17, 1896.

ACID GRAVITY BATTERY,

For All Open Circuit Work.



PARTZ SULPHO-CHROMIG SALT

affords the best, cleanest and most convenient method of making elec-tropoion fluid for medical batteries, Grenet cells, Bunsen batteries for

SEND FOR CATALOGUE



E. M. F. 1.9. 2 Volts. PRICE

PRICE, \$1.50 Per Cell.

THE S. S. WHITE DENTAL MFC. CO...

Chestnut St., Cor. Twelfth,

HICKORY BROOM FIBRE CO.

RATTAN, BASS AND COMBINATION

Department of Street Cleaning

H. M. Livor, Esq., President,

Hickory Broom Fibre Co.,

511 West 13th Str. Gity.

Dear Sir:-

in response to your request, it gives as pleasure to any that we have used your brooms since January last, and have found them very satisfactory. We are still using them. They are very good brooms. That I like especially about them, is the reinforced scraper in which the thin blade is made of triple thickness at the ends, where the wear is hardent.

Very truly yours,

USH BROOMS.



SWEEPING · MACHINE · BROOMS

FILLED WITH HICKORY FIBRE, RATTAN OR BASS.

Catalogue and Price List on Application.

511 West 13th St., N. Y.

THE MUNICIPAL SIGNAL COMPANY'S

Installed in the following; among many other prominent cities; each of the successive sixteen police precincts equipped since 1886 in the City of Boston, Mass., Newark, N. J., Fall River, Mass., Albany, N. Y., Manchester, N. H. In operation absolutely noninterfering, and CAN ALONE LECALLY, distinguish important or Emergency signals, from less important, or on-duty signals. Municipalities contemplating the installation of a Police Signal and Intercommunication System will on investigation feel assured of its positively reliable and at all times effective work.

SIGNAL COMPANY

2stimates, Descriptive Matter, References...

28 STATE STREET, BOSTON, MASS.

UTICA PIPE FOUNDRY

CAST IRON PIPE

CULVERT PIPE.
WROUGHT IRON PIPE, FITTINGS, VALVES.

Supplies of all kinds for Steam, Water and Gas, at Lowest Prices,

CHAS. MILLAR & SON, Selling Utica, N. Y. Manufacturers of LEAD PIPE & PLUMBERS' MATERIALS. Wholesale Eastern Agents Abren Viertines Sewer Pipe.

68 Murray Street.

THE LARGEST HOSE MANUFACTURERS IN THE WORLD.

Has more hose in actual service at the present time than all other manufacturers combined.

CHICAGO, 148-145 Lake Street.

PROVIDENCE, R. I., C. N. Richardson, N. E. Agent.

PORTLAND, ORE.
A. G. Long, 171 Fourth St.

MONTREAL. 57 St. Frs. Xavier St.

-and the soil in which we seek to raise it is your mind-'t is this:

We wish to make you wonder if it would not be a costly oversight on your part not to communicate with us when in want of any modern Fire Appliances.

More than fifty years concentrated upon the production and perfection of fire extinguishing apparatus have borne their legitimate fruit in a line of goods recognized as leaders the wide world over. Among countless other goods we make the following specialties:

Aerial Tracks for Life Saving Fire Extinguishers Hose Carriages Patrol Wagons
Swinging Harness Chemical Engines Hose Carts Hand Fire Engines
Flexible Adjustable Steel Collars Hose Wagons Combination Pieces Hose and Ladder Trucks
Also an exhaustive line of general Fire Department Supplies
We put out fully illustrated catalogues on the subject of putting out fires, these we gladly mail to interested applicants

GLEASON & BAILEY MFG. CO. (Advertising Department) 181-189 Mercer St., New York

1889.

PARIS EXPOSITION.

Rubber Insulation

1893

WORLD'S FAIR.

Rubber Insulation.

The Standard for Rubber Insulation.

Okonite Wires, Okonite Tape, Manson Tape, Candee Weather-Proof Wires.

ARD L. CANDEE, Managera. IR ANT CHEEVER, Managera. T. MANSON, General Manager. HODGINS, Secretary.

WRITE FOR PRICES. 253 Broadway, NEW YORK.